TA-F444ESX/F700ES

2485

SERVICE MANUAL

TA-F444ESX:
E Model

TA-F700ES:
US Model
Canadian Model
AEP Model
UK Model

MC-Service

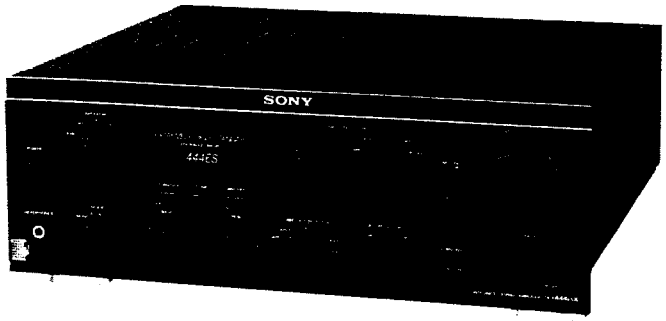


Photo: TA-F444ESX

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (US Model)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 4 ohm loads, both channels driven, from 20 – 20,000 Hz; rated 140 watts per channel minimum RMS power, with no more than 0.008% total harmonic distortion from 250 milliwatts to rated output.
With 8 ohm loads, both channels driven, from 20 – 20,000 Hz; rated 105 watts per channel minimum RMS power, with no more than 0.004% total harmonic distortion from 250 milliwatts to rated output.

OTHER SPECIFICATIONS

Item	Condition	Data
Continuous RMS power output (both channels driven simultaneously)	4 ohms 20 Hz - 20 kHz THD 0.008% 0.009% (G-AEP)	145 W + 145 W (AEP, G-AEP, UK, E)
	6 ohms 20 Hz - 20 kHz THD 0.006% 0.008% (G-AEP)	125 W + 125 W (AEP, G-AEP, UK, E)
		120 W + 120 W (US, Canadian, North European contries)
	8 ohms 20 Hz - 20 kHz THD 0.004% 0.006% (G-AEP)	110 W + 110 W (AEP, G-AEP, UK, E)
		105 W + 105 W (US, Canadian, North European contries)
Power band - width (IHF)	4 ohms, 0.02%	10 Hz - 100 kHz
	8 ohms, THD 0.02%	10 Hz - 100 kHz
Dynamic headroom ('78 IHF)	4 ohms	3 dB
	8 ohms	2 dB
Total harmonic distortion	4 ohms, at 10 watt output	0.006%
	6 ohms, at 10 watt output	0.004%
	8 ohms, at 10 watt output	0.002%

– Continued on page 2 –

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT A LA SECURITE!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

INTEGRATED STEREO AMPLIFIER

SONY®

MICROFILM

AUD

TA-F444ESX/F700ES

Intermodulation (IM) distortion 60 Hz: 7 kHz = 4 : 1	4 ohms at rated output		0.008% 0.009% (G-AEP)
	6 ohms at rated output		0.006% 0.008% (G-AEP)
	8 ohms at rated output		0.004% 0.006% (G-AEP)
Damping factor	8 ohms, 1 kHz		100
Slew rate	—		125 V/μsec 250 V/μsec (inside)
Residual noise	network A		less than 115 μV
Frequency response	PHONO MM		RIAA equalization curve ±0.2 dB
	TUNER, CD TAPE 1, 2, 3		2 Hz - 200 kHz $^{+0}_{-3}$ dB
			2 Hz - 100 kHz $^{+0}_{-3}$ dB (G-AEP)
Input sensitivity	PHONO	MC 3 ohms	0.17 mV, 33 ohms (G-AEP)
			0.17 mV, 100 ohms (US, Canadian AEP, UK, E)
		40 ohms	0.17 mV, 100 ohms (G-AEP)
			0.17 mV, 1 kohm (US, Canadian AEP, UK, E)
		MM	2.5 mV, 50 kohms
	TUNER, CD, AUX, TAPE 1, 2, 3 ADAPTOR IN		150 mV, 50 kohms
Maximum input capability (1 kHz)	PHONO (1 KHz, THD 0.003%)	MC	9 mV
		MM	150 mV
S/N (network)	PHONO	MC	76 dB , 68 dB (A)
		MM	80 dB , 87 dB (A)
78 IHF	TUNER, CD, AUX, TAPE 1, 2, 3 ADAPTOR IN		84 dB , 105 dB (A)
Output voltage impedance	REC OUT 1, 2, 3 ADAPTOR OUT		150 mV, 1 kohm
	HEADPHONES		25 milliwatts (at 8 ohms) Accepts low and high impedance headphones.
Tone controls	BASS, at 100 Hz		$^{+4}_{-3.5}$ dB (turnover frq. 200 Hz)
			$^{+6}_{-5}$ dB (turnover frq. 400 Hz)
	TREBLE, at 10 kHz		$^{+7}_{-8}$ dB (turnover frq. 3 kHz)
			$^{+4}_{-5}$ dB (turnover frq. 5 kHz)
SUBSONIC filter	—		6 dB/octave attenuation below 15 Hz

General

System — Preamplifier section: Low-noise FET high gain NFB type equalizer amplifier, passive type direct tone control
Power amplifier section: purecomplementary SEPP power amplifier

Power requirements
US, Canadian Model: 120V AC, 60Hz
AEP, G-AEP Model: 220V AC, 50/60Hz
UK Model: 240V AC, 50Hz
E Model: 120, 220, or 240V AC adjustable, 50/60Hz

Power consumption
US Model: 330 watts
Canadian Model: 760VA
G-AEP Model: 390 watts
UK Model: 350 watts
AEP Model: 270 watts
E Model: 390 watts

AC outlets
US Canadian Model:
2 switched, total 100 watts max.,
2 unswitched, total 100 watts max.
AEP, G-AEP, UK Model: 1 switched, 100 watts max.
E Model: 1 switched, 100 watts max.
1 unswitched, 100 watts max.

Dimensions — Approx. 430 × 160 × 436 mm (w/h/d)
(17 × 6 3/8 × 17 1/4 inches)
including projecting parts and controls

Weight — Approx. 18.3 kg (40 lbs 6 oz) net

FEATURES

Newly developed technologies assure excellent performance and tone quality

Pure sound
A head chassis, named "Gibraltar" which provides high rigidity and periodic damping characteristics, is employed to reduce distortion caused by vibrations.
This reduces air vibrations caused by floor and speakers and also reduces vibrations caused by the power transformer and power transistors.

Spontaneous twin drive power circuit
Condensers having large capacity are used for the voltage amplification drive stage of class A and power output stage of class B. Thus, a stable output and high quality sound are obtained, resulting in exclusion of power interferences.
The class A stage realizes a stable operation free from interference of the power stage even when an instantaneous or strong output is received.

Simple and direct tone control
The tone controls consist of only passive elements to minimize the deterioration of tone quality at the tone control circuit.
Tone control elements can be passed by depressing the tone switch.

Source direct switch
A source direct switch is employed to reproduce high fidelity sound.
Any source can be reproduced without passing through the circuits of tone control, subsonic filter, mode switch and balance control.

Super legato linear system
The power amplifier drives low impedance speakers and assures powerful reproduction without low crossover distortion and switching distortion over the wide range.
(Low impedance instantaneous service output 350 W + 350 W, 1 ohm loaded)

SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

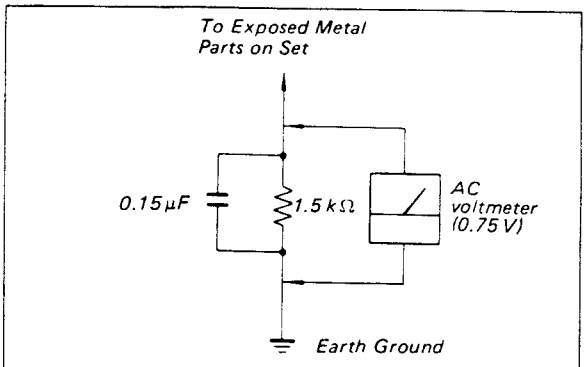
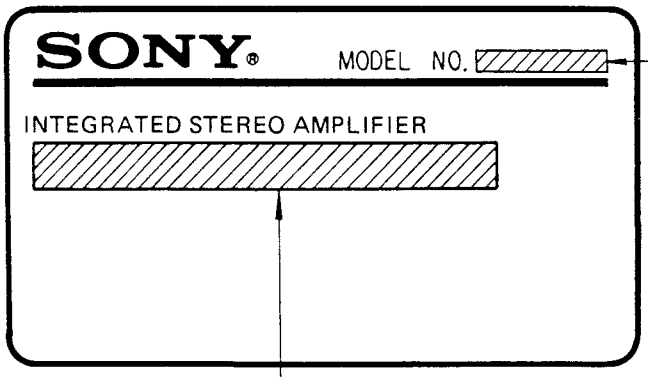


Fig. A. Using an AC voltmeter to check AC leakage.

MODEL IDENTIFICATION

– Specification Label –



E Model: TA-F444ESX
US Model: TA-F700ES
Canadian Model: TA-F700ES
AEP Model: TA-F700ES
UK Model: TA-F700ES
G-AEP Model: TA-F700ES

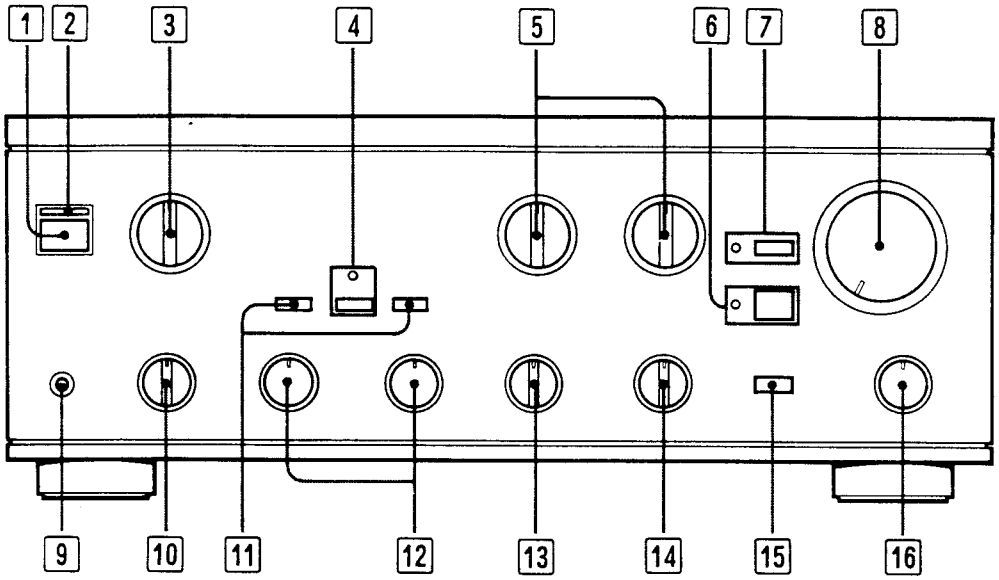
US Model	:	AC120V	60Hz	330W
Canadian Model	:	AC120V	60Hz	760VA
AEP Model	:	AC220V	50/60Hz	270W
G-AEP Model	:	AC220/240V	50/60Hz	390W
UK Model	:	AC220/240V	50/60Hz	350W
E Model	:	AC120/220/240V	50/60Hz	390W

TABLE OF CONTENTS

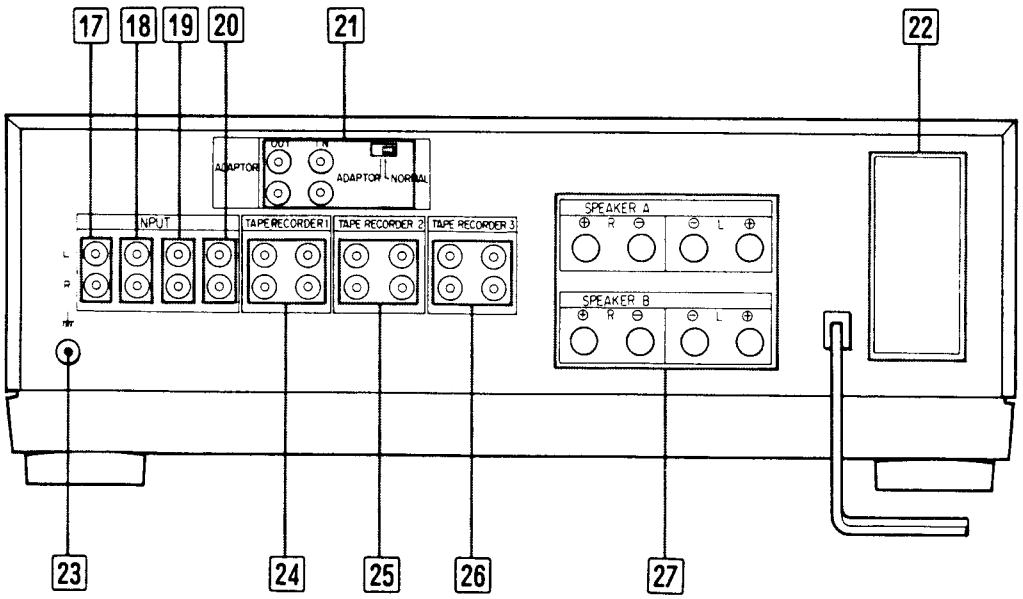
Title	*Description*	*Page*
	Specifications	1
	Features	2
	Safety Check-out (US Model)	3
	Model Identification	3
	Function of Controls	5
	Note on Repairing Disassembly and Assembly for Switch Section	8
Section 1.	Block Diagram	9
Section 2.	Disassembly	11
Section 3.	Adjustments	14
Section 4.	Diagrams	
4-1.	Mounting Diagram	15
4-2.	Schematic Diagram	19
Section 5.	Exploded Views and Parts List	23
Section 6.	Electrical Parts List	27

FUNCTION OF CONTROLS

Front panel / Panneau avant / Vorderseite / Panel frontal / Voorpaneel



Rear panel / Panneau arrière / Rückseite / Panel posterior / Achterpaneel



Front panel

1 POWER switch

2 Power/standby indicator
Immediately after turning ON the power, the standby indicator lights in red as the built-in muting circuit activates.
When the amplifier stays in a stable operating condition, the indicator lights in green.
The indicator lights in red when the unit detects shorting of circuit of the speaker outputs or in case of short-circuit of the inputs of DC components.
In such a case, disconnect the power source and check the connected components and speaker systems.

3 SPEAKERS selector
Select speaker system A or B, or both.
For headphone monitoring only, set the selector to OFF.

4 TONE switch and indicator
Depress the switch to activate the tone control circuit.
Red indicator lights.

5 INPUT SELECTOR and TAPE input selector
To select the desired program source, use the INPUT SELECTOR.
To select TAPE 1, 2 or 3, set the INPUT SELECTOR to TAPE and set the TAPE input selector to the desired tape input position.

6 SOURCE DIRECT switch and indicator
Depress the switch. The red indicator lights and the circuits of the TONE switch, SUBSONIC filter switch, BALANCE control and MODE switch are disengaged without regard to the setting of the switches.
When this switch is activated, the indicator of the TONE switch does not light.

7 MUTING switch and indicator
Generally, keep the switch released (OFF).
Depress the switch to reduce the sound level by 20dB.
(Output voltage becomes 1/10.)

8 ATTENUATOR knob
Regulates the sound level.

9 HEADPHONES jack (stereo phone jack)

10 MODE selector
STEREO: For listening to a stereo program.
MONO: For listening to a monaural program.

11 TURNOVER frequency selection switches
Switch the turnover frequency.

12 BASS and TREBLE controls
These controls activate when the TONE switch is depressed.

13 REC OUT SELECTOR
Selects the program source sent to the REC OUT jacks (rear panel).

14 CARTRIDGE LOAD selector
Set the selector according to your cartridge.
MM: For moving-magnet type cartridge
MC: For moving-coil type cartridge
40 Ω: For a cartridge with an impedance of 40 ohms or more.
3 Ω: For a cartridge with an impedance of 3 ohms to 40 ohms.

15 SUBSONIC filter switch
Depress the switch to reduce unwanted noise components of less than 15Hz, which cause modulation noise.

16 BALANCE control
Controls the sound level of left and right speakers.

Rear panel

17 PHONO input jacks

18 TUNER input jacks

19 CD (Compact Disc) input jacks

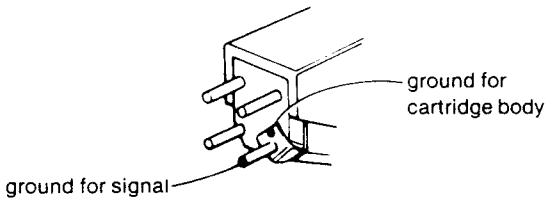
20 AUX (Auxiliary) input jacks

21 ADAPTOR IN/OUT (input and output) jacks and adaptor switch
The OUT jacks output the signals selected by the INPUT SELECTOR on the front panel and the IN jacks receive the signals.
When an additional equipment such as a graphic equalizer is connected, set the adaptor switch to ADAPTOR.
When the jacks are not used, set the switch to NORMAL.

22 AC OUTLET(s) and VOLTAGE SELECTOR (E Model)
The AC OUTLET is used to power other audio components whose total power consumption is less than the wattage indicated near the AC OUTLET.

23 Ground terminal ⏚
To prevent hum, be sure to connect the ground wire of the turntable system to this ground terminal. If hum still exists, it may be helpful to connect the ground terminal directly to earth via a ground rod.

Note
In some particular MM cartridges, the ground for signal is connected to the ground for cartridge body.
If this type of cartridge should be installed to a metal cartridge shell, current will flow through the tonearm ground in a loop and will cause hum noise. In this case, disconnect the turntable ground wire from the ⏚ terminal of the amplifier, or disconnect the ground for cartridge body from the ground for signal.



24 25 26 TAPE RECORDER 1, 2, 3 input/output jacks
REC OUT (recording output) jacks: Accept the tape input jacks of the tape recorder.
To connect a hi-fi video cassette recorder, connect the audio line input jacks of the video cassette recorder to these jacks.
TAPE (tape input) jacks: Accept the REC output jacks of the tape recorder.
To connect a hi-fi video cassette recorder, video disc player or TV tuner, connect the audio line output jacks of each equipment to these jacks.

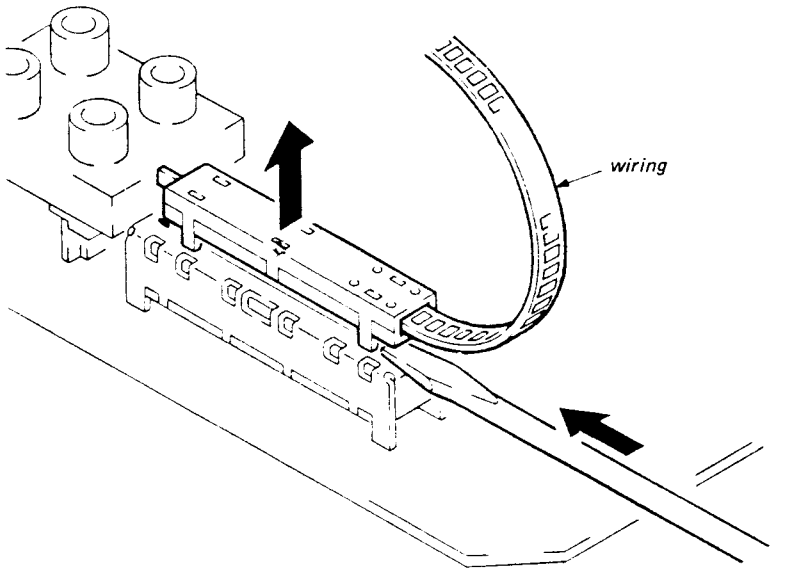
27 SPEAKER output terminals
Two pairs of speaker systems can be connected.
System A, system B or system A and B can be selected by means of the front panel SPEAKERS selector.

NOTE ON REPAIRING
DISASSEMBLY AND ASSEMBLY FOR SWITCH SECTION

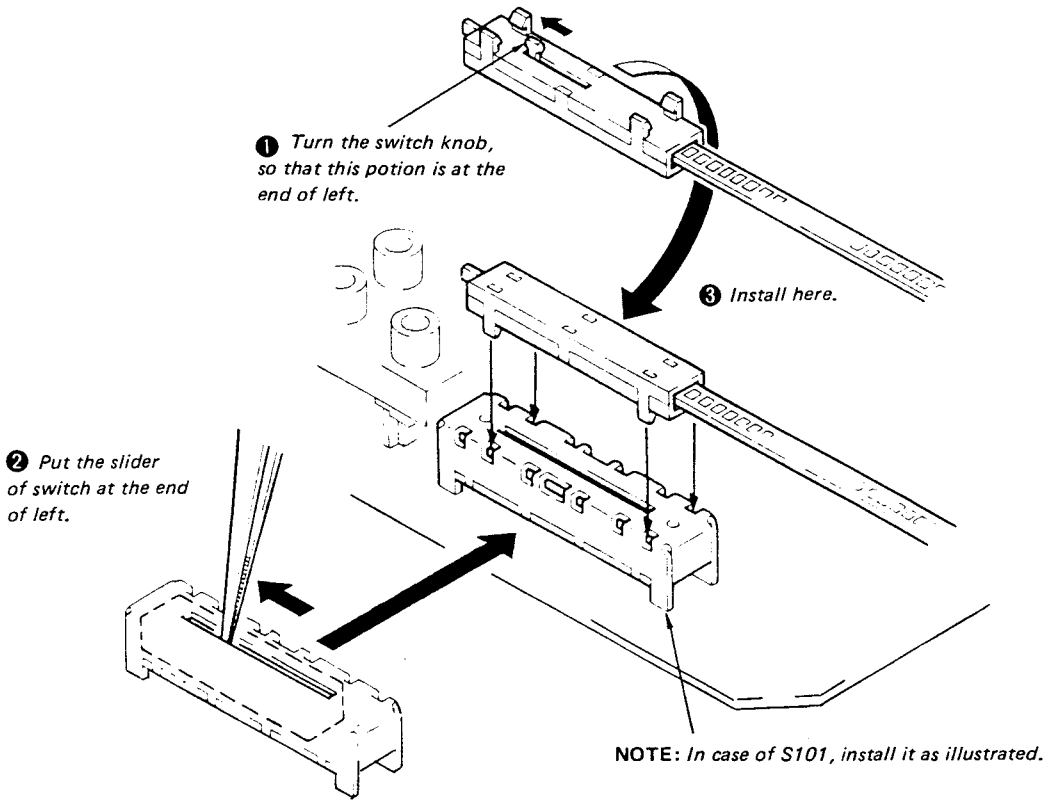
Note: Follow the assembly procedure in the numerical order given.

DISASSEMBLY

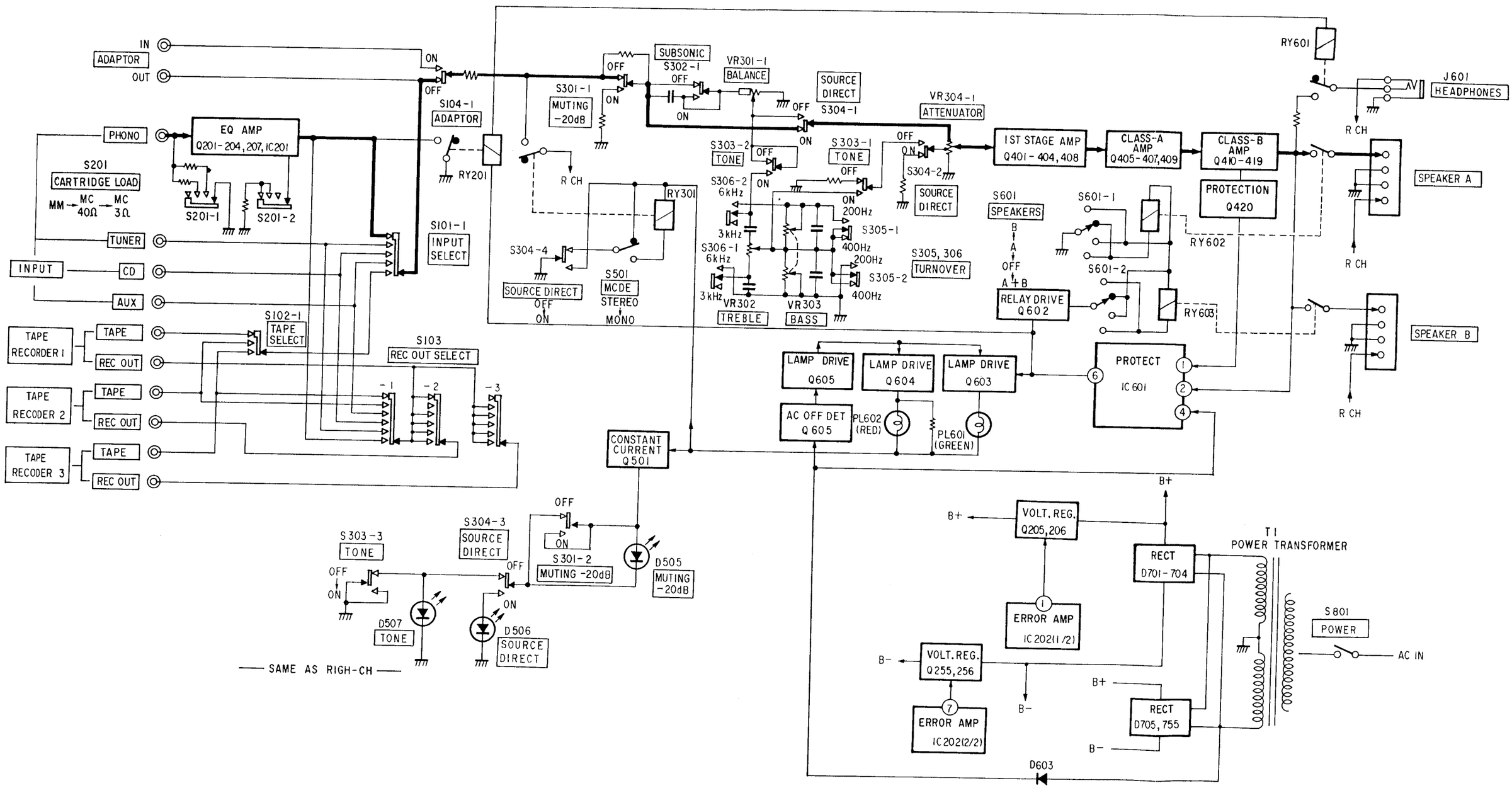
Insert in the screwdriver and remove the wiring as illustrated below
CAUTION: Don't pull the wiring. It causes the wiring damage.



ASSEMBLY


❶ Turn the switch knob, so that this potion is at the end of left.
❸ Install here.
❷ Put the slider of switch at the end of left.
NOTE: In case of S101, install it as illustrated.

SECTION 1
BLOCK DIAGRAM

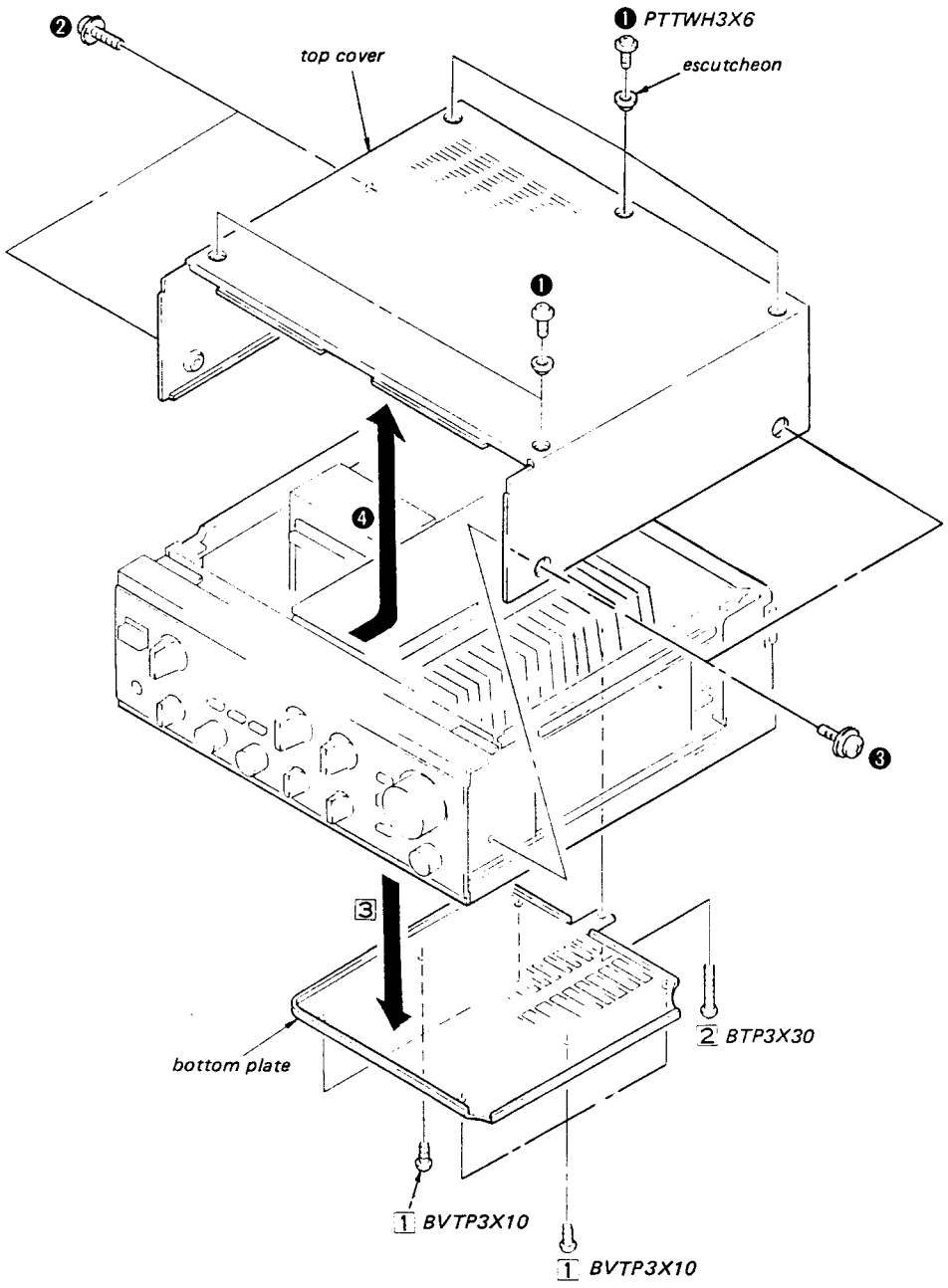


SECTION 2
DISASSEMBLY

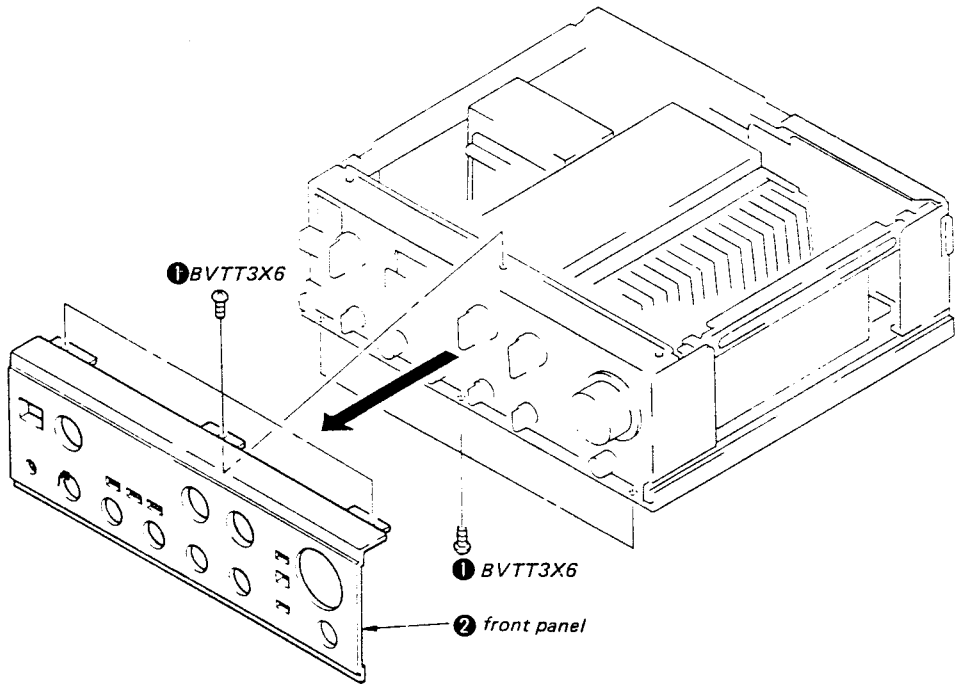
Note: Follow the disassembly procedure in the numerical order given.

TOP COVER AND BOTTOM PLATE REMOVAL

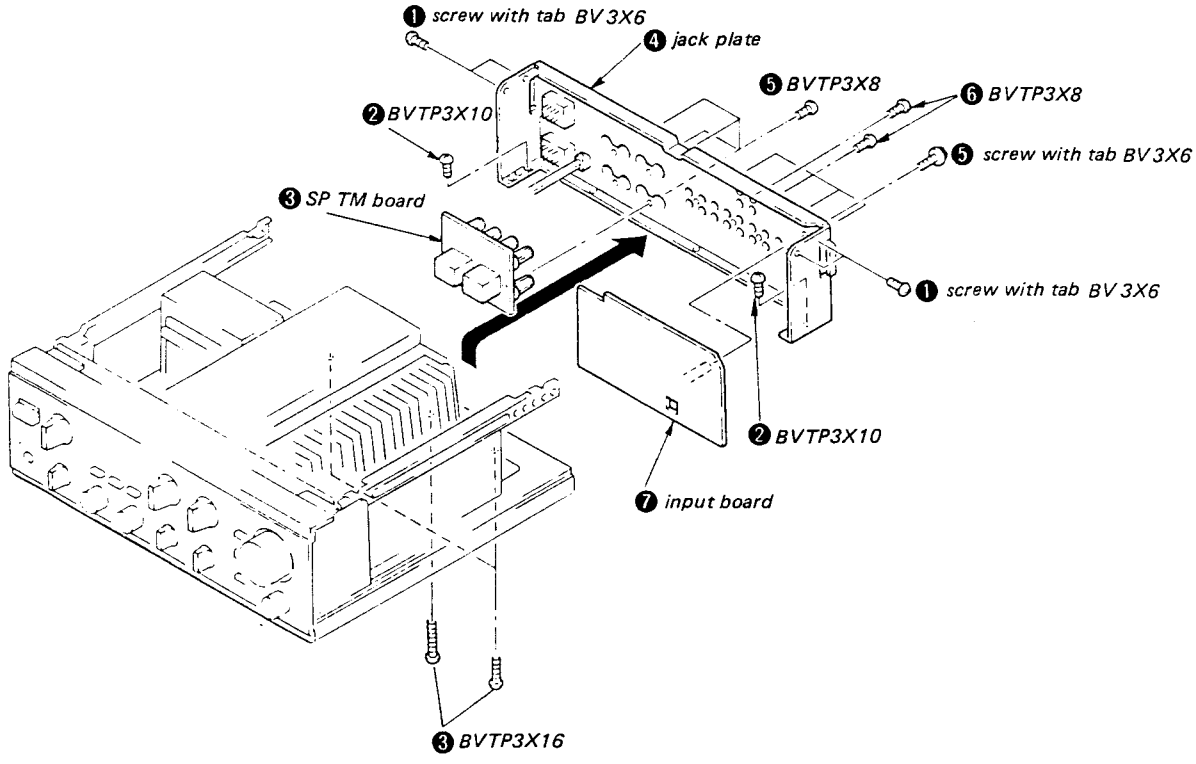
TOP COVER : ❶~❹
BOTTOM PLATE : 1~3



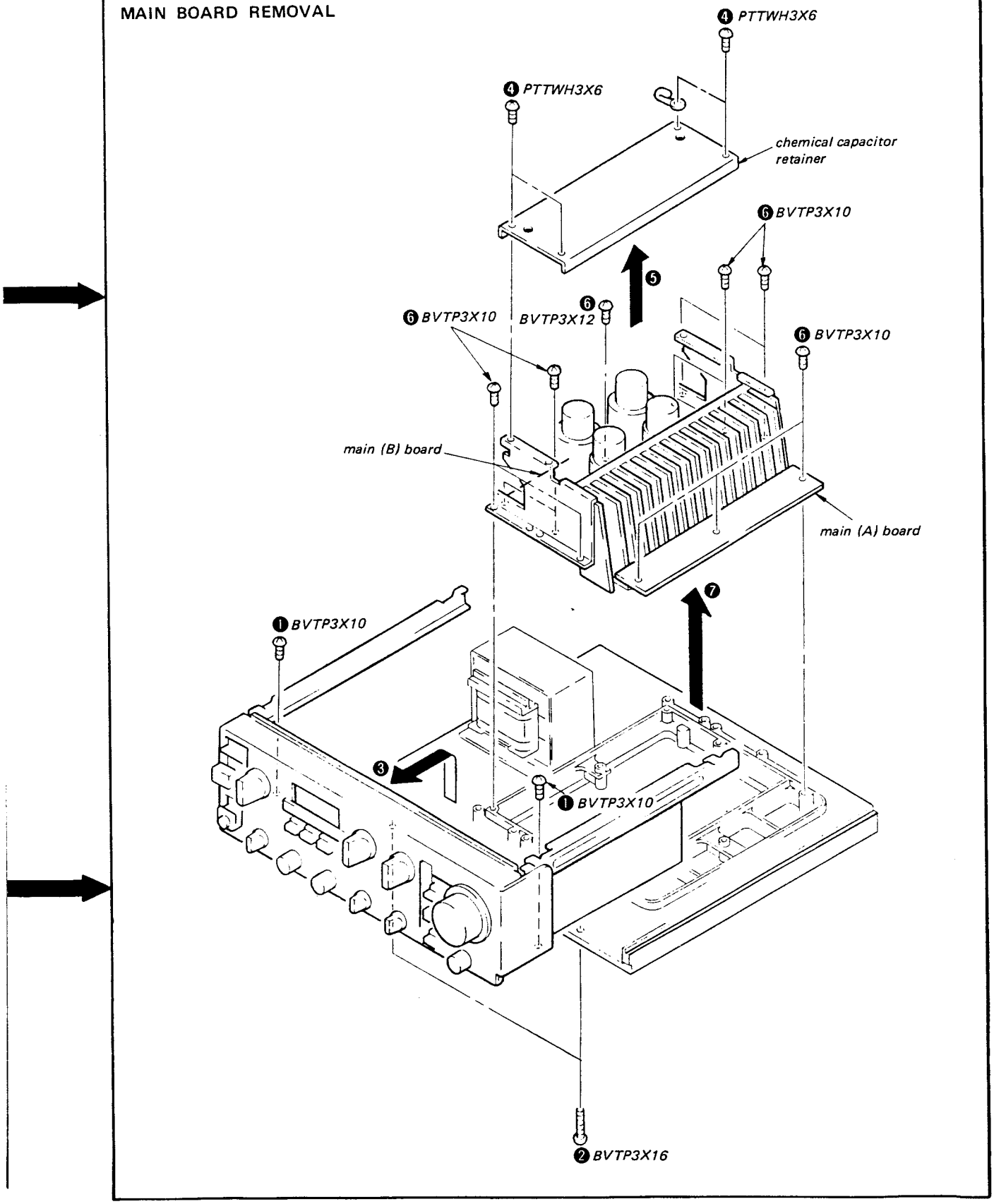
FRONT PANEL REMOVAL



JACK PLATE REMOVAL



MAIN BOARD REMOVAL

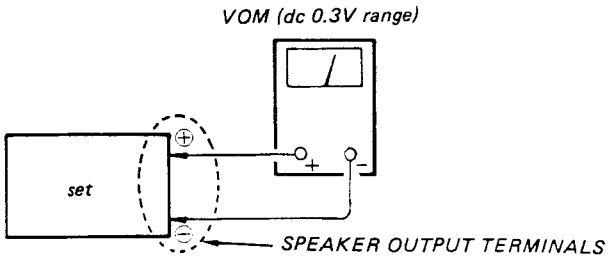


SECTION 3
ADJUSTMENTS

NOTE:

- Adjustments should be performed 10 minutes after the POWER switch is on (POWER ON).

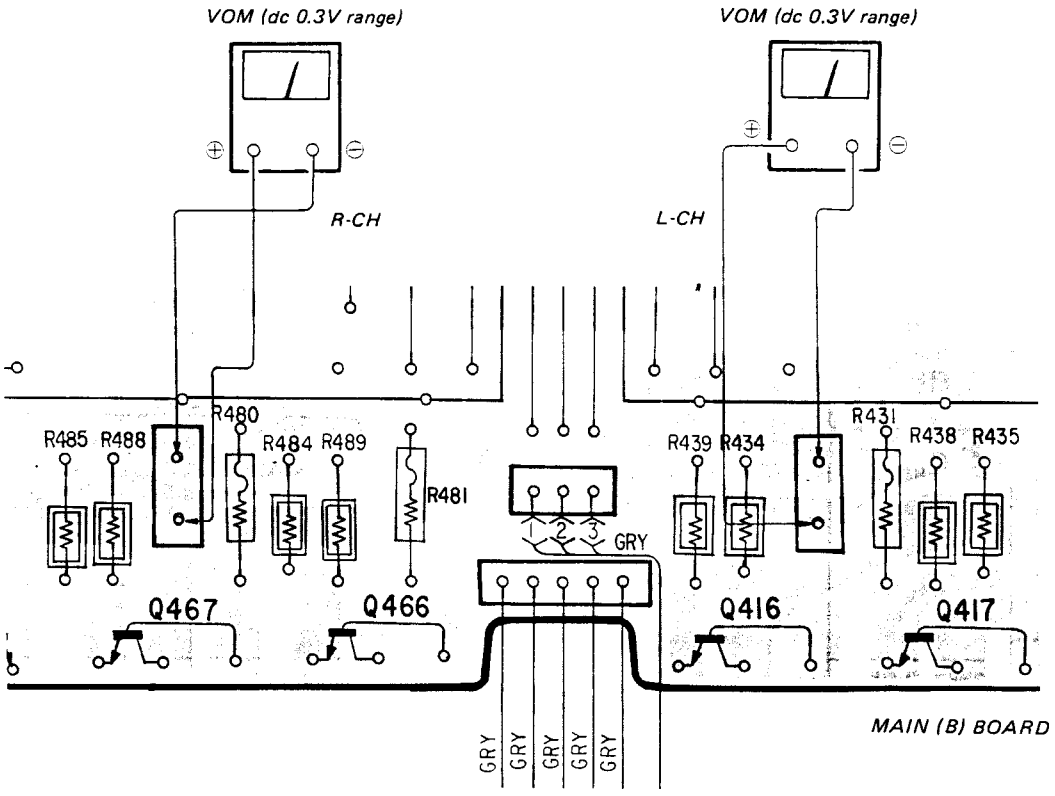
OFFSET Adjustment



1. Turn the ATTENUATOR knob fully counterclockwise under no-signal conditions.
2. Adjust RT401 and RT451 for 0V readings VOM.

DC BIAS Adjustment

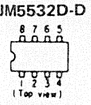
1. Turn the ATTENUATOR knob fully counterclockwise under no-signal conditions.
2. Adjust RT402 and RT452 for 15mV readings on VOM.



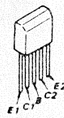
SECTION 4
DIAGRAMS

• SEMICONDUCTOR LEAD LAYOUTS

M5218P
M5220P
NJM5532D-D



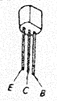
2SA995



2SB734

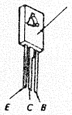
UPC1237H

2SA988-F
2SB647
2SC1841-PA

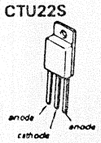


2SA1142
2SB731
2SD668
2SD809

MARKING SIDE VIEW



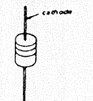
CTU22R
CTU22S



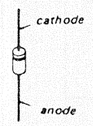
2SK246GR2

2SK170

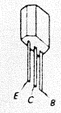
ISS132



30DF2
EQ801-12Z

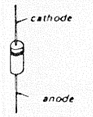


2SA1027R

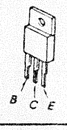


2SC634SP

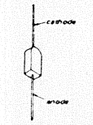
10E2
HZ6C3L
HZ7B2L
HZ9B2L
HZ11A1L
HZ15-3L



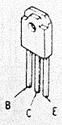
2SA985A
2SA1383
2SB1094-L
2SC3514
2SC2275-P



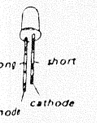
SV-02
SV-03



2SA1186
2SC2837



SEL2810A



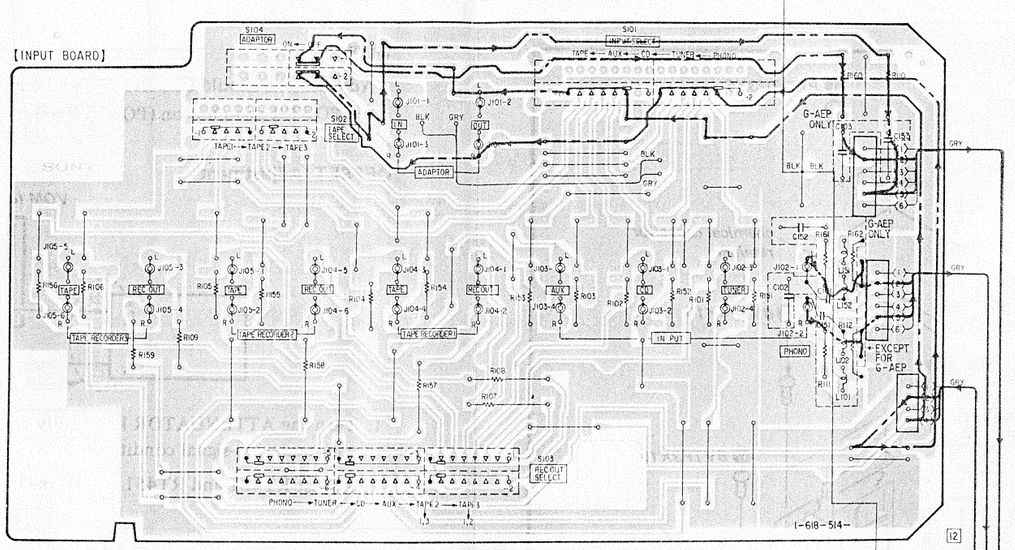
2SK389-GR

• See page 22 for circuit boards location.

1 2 3 4 5 6 7 8 9 10 11 12 13

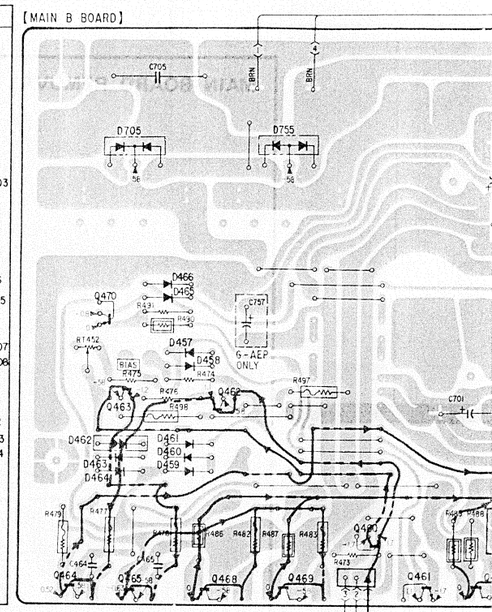
A B C D E F G H I J

【INPUT BOARD】

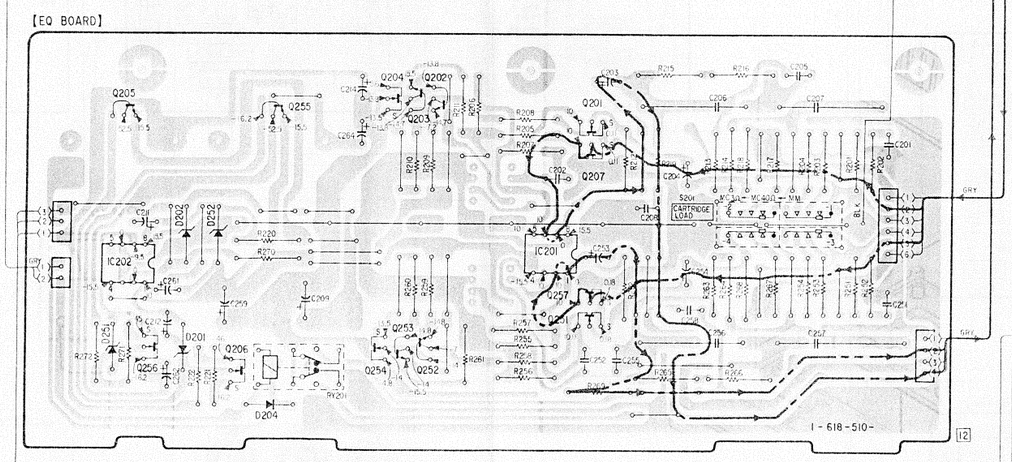


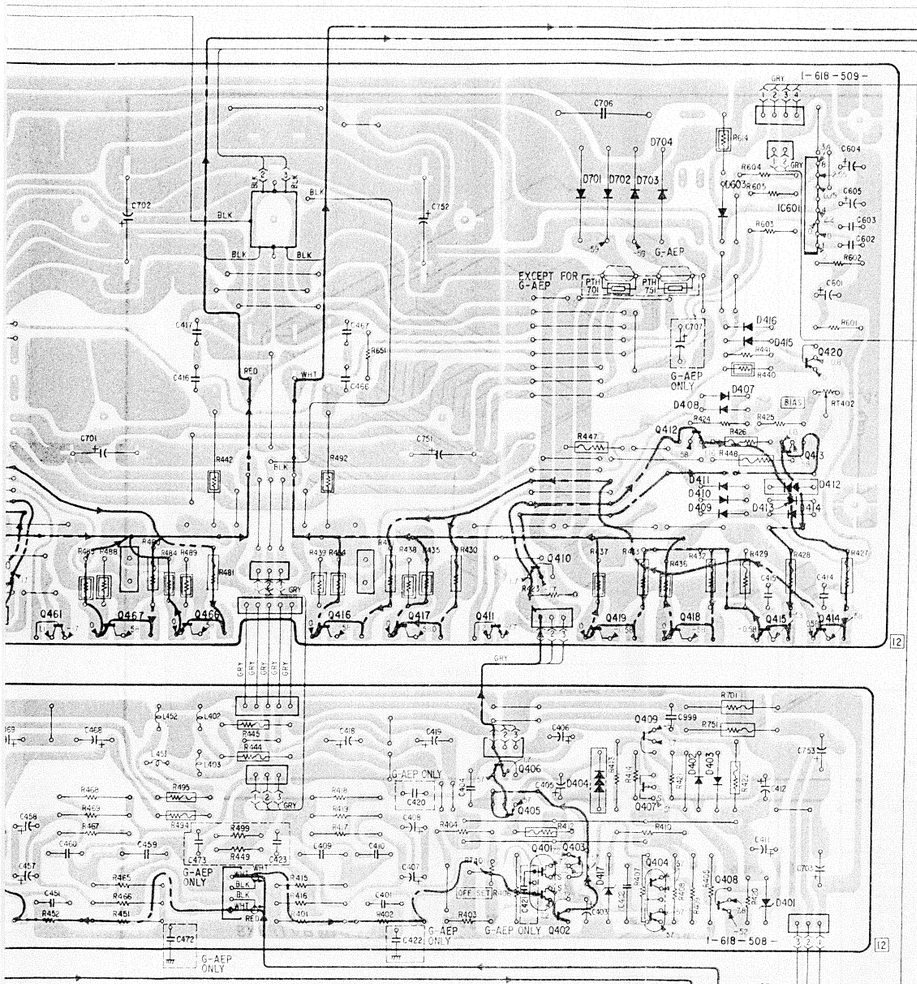
IC , Q	D
	705,755 701,702 703,704
IC601	603
	466 416
470 420	465 415
	457
	458 407 408
463 462 412 413	411,412
	462, 461 410,413
	463,460 409,414
	464, 459
460 410	
465,469,467,466 464,468,461	417, 419, 415 416,411,418,414

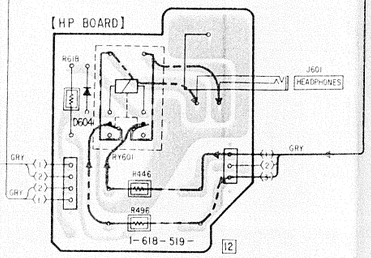
【MAIN B BOARD】

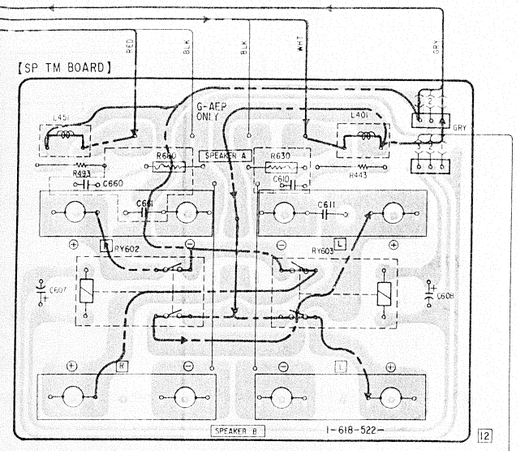


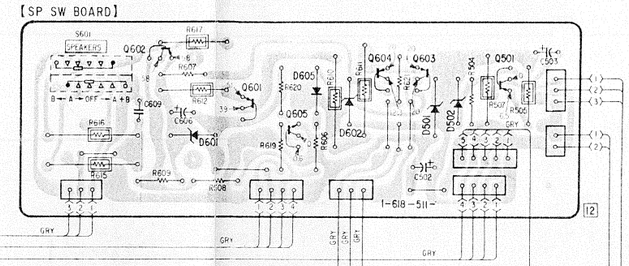
【EQ BOARD】

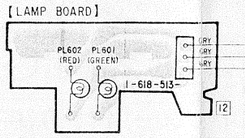

Q205
Q255
Q204
Q202
Q203
Q201
Q207
R205
R206
C205
C206
C207
R208
R209
R210
R211
R212
R213
R214
R215
R216
R217
R218
R219
C201
C202
C203
C204
C208
C209
C210
C211
C212
C213
C214
C215
C216
C217
C218
C219
C220
C221
C222
C223
C224
C225
C226
C227
C228
C229
C230
C231
C232
C233
C234
C235
C236
C237
C238
C239
C240
C241
C242
C243
C244
C245
C246
C247
C248
C249
C250
C251
C252
C253
C254
C255
C256
C257
C258
C259
C260
C261
R220
R221
R222
R223
R224
R225
R226
R227
R228
R229
R230
R231
R232
R233
R234
R235
R236
R237
R238
R239
R240
R241
R242
R243
R244
R245
R246
R247
R248
R249
R250
R251
R252
R253
R254
R255
R256
R257
R258
R259
R260
R261
R262
R263
R264
R265
R266
R267
R268
R269
R270
R271
R272
R273
R274
R275
R276
R277
R278
R279
R280
R281
R282
R283
R284
R285
R286
R287
R288
R289
R290
R291
R292
R293
R294
R295
R296
R297
R298
R299
R2A0
R2A1
R2A2
R2A3
R2A4
R2A5
R2A6
R2A7
R2A8
R2A9
R2B0
R2B1
R2B2
R2B3
R2B4
R2B5
R2B6
R2B7
R2B8
R2B9
R2C0
R2C1
R2C2
R2C3
R2C4
R2C5
R2C6
R2C7
R2C8
R2C9
R2D0
R2D1
R2D2
R2D3
R2D4
R2D5
R2D6
R2D7
R2D8
R2D9
R2E0
R2E1
R2E2
R2E3
R2E4
R2E5
R2E6
R2E7
R2E8
R2E9
R2F0
R2F1
R2F2
R2F3
R2F4
R2F5
R2F6
R2F7
R2F8
R2F9
R2G0
R2G1
R2G2
R2G3
R2G4
R2G5
R2G6
R2G7
R2G8
R2G9
R2H0
R2H1
R2H2
R2H3
R2H4
R2H5
R2H6
R2H7
R2H8
R2H9
R2I0
R2I1
R2I2
R2I3
R2I4
R2I5
R2I6
R2I7
R2I8
R2I9
R2J0
R2J1
R2J2
R2J3
R2J4
R2J5
R2J6
R2J7
R2J8
R2J9
R2K0
R2K1
R2K2
R2K3
R2K4
R2K5
R2K6
R2K7
R2K8
R2K9
R2L0
R2L1
R2L2
R2L3
R2L4
R2L5
R2L6
R2L7
R2L8
R2L9
R2M0
R2M1
R2M2
R2M3
R2M4
R2M5
R2M6
R2M7
R2M8
R2M9
R2N0
R2N1
R2N2
R2N3
R2N4
R2N5
R2N6
R2N7
R2N8
R2N9
R2O0
R2O1
R2O2
R2O3
R2O4
R2O5
R2O6
R2O7
R2O8
R2O9
R2P0
R2P1
R2P2
R2P3
R2P4
R2P5
R2P6
R2P7
R2P8
R2P9
R2Q0
R2Q1
R2Q2
R2Q3
R2Q4
R2Q5
R2Q6
R2Q7
R2Q8
R2Q9
R2R0
R2R1
R2R2
R2R3
R2R4
R2R5
R2R6
R2R7
R2R8
R2R9
R2S0
R2S1
R2S2
R2S3
R2S4
R2S5
R2S6
R2S7
R2S8
R2S9
R2T0
R2T1
R2T2
R2T3
R2T4
R2T5
R2T6
R2T7
R2T8
R2T9
R2U0
R2U1
R2U2
R2U3
R2U4
R2U5
R2U6
R2U7
R2U8
R2U9
R2V0
R2V1
R2V2
R2V3
R2V4
R2V5
R2V6
R2V7
R2V8
R2V9
R2W0
R2W1
R2W2
R2W3
R2W4
R2W5
R2W6
R2W7
R2W8
R2W9
R2X0
R2X1
R2X2
R2X3
R2X4
R2X5
R2X6
R2X7
R2X8
R2X9
R2Y0
R2Y1
R2Y2
R2Y3
R2Y4
R2Y5
R2Y6
R2Y7
R2Y8
R2Y9
R2Z0
R2Z1
R2Z2
R2Z3
R2Z4
R2Z5
R2Z6
R2Z7
R2Z8
R2Z9
R3A0
R3A1
R3A2
R3A3
R3A4
R3A5
R3A6
R3A7
R3A8
R3A9
R3B0
R3B1
R3B2
R3B3
R3B4
R3B5
R3B6
R3B7
R3B8
R3B9
R3C0
R3C1
R3C2
R3C3
R3C4
R3C5
R3C6
R3C7
R3C8
R3C9
R3D0
R3D1
R3D2
R3D3
R3D4
R3D5
R3D6
R3D7
R3D8
R3D9
R3E0
R3E1
R3E2
R3E3
R3E4
R3E5
R3E6
R3E7
R3E8
R3E9
R3F0
R3F1
R3F2
R3F3
R3F4
R3F5
R3F6
R3F7
R3F8
R3F9
R3G0
R3G1
R3G2
R3G3
R3G4
R3G5
R3G6
R3G7
R3G8
R3G9
R3H0
R3H1
R3H2
R3H3
R3H4
R3H5
R3H6
R3H7
R3H8
R3H9
R3I0
R3I1
R3I2
R3I3
R3I4
R3I5
R3I6
R3I7
R3I8
R3I9
R3J0
R3J1
R3J2
R3J3
R3J4
R3J5
R3J6
R3J7
R3J8
R3J9
R3K0
R3K1
R3K2
R3K3
R3K4
R3K5
R3K6
R3K7
R3K8
R3K9
R3L0
R3L1
R3L2
R3L3
R3L4
R3L5
R3L6
R3L7
R3L8
R3L9
R3M0
R3M1
R3M2
R3M3
R3M4
R3M5
R3M6
R3M7
R3M8
R3M9
R3N0
R3N1
R3N2
R3N3
R3N4
R3N5
R3N6
R3N7
R3N8
R3N9
R3O0
R3O1
R3O2
R3O3
R3O4
R3O5
R3O6
R3O7
R3O8
R3O9
R3P0
R3P1
R3P2
R3P3
R3P4
R3P5
R3P6
R3P7
R3P8
R3P9
R3Q0
R3Q1
R3Q2
R3Q3
R3Q4
R3Q5
R3Q6
R3Q7
R3Q8
R3Q9
R3R0
R3R1
R3R2
R3R3
R3R4
R3R5
R3R6
R3R7
R3R8
R3R9
R3S0
R3S1
R3S2
R3S3
R3S4
R3S5
R3S6
R3S7
R3S8
R3S9
R3T0
R3T1
R3T2
R3T3
R3T4
R3T5
R3T6
R3T7
R3T8
R3T9
R3U0
R3U1
R3U2
R3U3
R3U4
R3U5
R3U6
R3U7
R3U8
R3U9
R3V0
R3V1
R3V2
R3V3
R3V4
R3V5
R3V6
R3V7
R3V8
R3V9
R3W0
R3W1
R3W2
R3W3
R3W4
R3W5
R3W6
R3W7
R3W8
R3W9
R3X0
R3X1
R3X2
R3X3
R3X4
R3X5
R3X6
R3X7
R3X8
R3X9
R3Y0
R3Y1
R3Y2
R3Y3
R3Y4
R3Y5
R3Y6
R3Y7
R3Y8
R3Y9
R3Z0
R3Z1
R3Z2
R3Z3
R3Z4
R3Z5
R3Z6
R3Z7
R3Z8
R3Z9
R4A0
R4A1
R4A2
R4A3
R4A4
R4A5
R4A6
R4A7
R4A8
R4A9
R4B0
R4B1
R4B2
R4B3
R4B4
R4B5
R4B6
R4B7
R4B8
R4B9
R4C0
R4C1
R4C2
R4C3
R4C4
R4C5
R4C6
R4C7
R4C8
R4C9
R4D0
R4D1
R4D2
R4D3
R4D4
R4D5
R4D6
R4D7
R4D8
R4D9
R4E0
R4E1
R4E2
R4E3
R4E4
R4E5
R4E6
R4E7
R4E8
R4E9
R4F0
R4F1
R4F2
R4F3
R4F4
R4F5
R4F6
R4F7
R4F8
R4F9
R4G0
R4G1
R4G2
R4G3
R4G4
R4G5
R4G6
R4G7
R4G8
R4G9
R4H0
R4H1
R4H2
R4H3
R4H4
R4H5
R4H6
R4H7
R4H8
R4H9
R4I0
R4I1
R4I2
R4I3
R4I4
R4I5
R4I6
R4I7
R4I8
R4I9
R4J0
R4J1
R4J2
R4J3
R4J4
R4J5
R4J6
R4J7
R4J8
R4J9
R4K0
R4K1
R4K2
R4K3
R4K4
R4K5
R4K6
R4K7
R4K8
R4K9
R4L0
R4L1
R4L2
R4L3
R4L4
R4L5
R4L6
R4L7
R4L8
R4L9
R4M0
R4M1
R4M2
R4M3
R4M4
R4M5
R4M6
R4M7
R4M8
R4M9
R4N0
R4N1
R4N2
R4N3
R4N4
R4N5
R4N6
R4N7
R4N8
R4N9
R4O0
R4O1
R4O2
R4O3
R4O4
R4O5
R4O6
R4O7
R4O8
R4O9
R4P0
R4P1
R4P2
R4P3
R4P4
R4P5
R4P6
R4P7
R4P8
R4P9
R4Q0
R4Q1
R4Q2
R4Q3
R4Q4
R4Q5
R4Q6
R4Q7
R4Q8
R4Q9
R4R0
R4R1
R4R2
R4R3
R4R4
R4R5
R4R6
R4R7
R4R8
R4R9
R4S0
R4S1
R4S2
R4S3
R4S4
R4S5
R4S6
R4S7
R4S8
R4S9
R4T0
R4T1
R4T2
R4T3
R4T4
R4T5
R4T6
R4T7
R4T8
R4T9
R4U0
R4U1
R4U2
R4U3
R4U4
R4U5
R4U6
R4U7
R4U8
R4U9
R4V0
R4V1
R4V2
R4V3
R4V4
R4V5
R4V6
R4V7
R4V8
R4V9
R4W0
R4W1
R4W2
R4W3
R4W4
R4W5
R4W6
R4W7
R4W8
R4W9
R4X0
R4X1
R4X2
R4X3
R4X4
R4X5
R4X6
R4X7
R4X8
R4X9
R4Y0
R4Y1
R4Y2
R4Y3
R4Y4
R4Y5
R4Y6
R4Y7
R4Y8
R4Y9
R4Z0
R4Z1
R4Z2
R4Z3
R4Z4
R4Z5
R4Z6
R4Z7
R4Z8
R4Z9
R5A0
R5A1
R5A2
R5A3
R5A4
R5A5
R5A6
R5A7
R5A8
R5A9
R5B0
R5B1
R5B2
R5B3
R5B4
R5B5
R5B6
R5B7
R5B8
R5B9
R5C0
R5C1
R5C2
R5C3
R5C4
R5C5
R5C6
R5C7
R5C8
R5C9
R5D0
R5D1
R5D2
R5D3
R5D4
R5D5
R5D6
R5D7
R5D8
R5D9
R5E0
R5E1
R5E2
R5E3
R5E4
R5E5
R5E6
R5E7
R5E8
R5E9
R5F0
R5F1
R5F2
R5F3
R5F4
R5F5
R5F6
R5F7
R5F8
R5F9
R5G0
R5G1
R5G2
R5G3
R5G4
R5G5
R5G6
R5G7
R5G8
R5G9
R5H0
R5H1
R5H2
R5H3
R5H4
R5H5
R5H6
R5H7
R5H8
R5H9
R5I0
R5I1
R5I2
R5I3
R5I4
R5I5
R5I6
R5I7
R5I8
R5I9
R5J0
R5J1
R5J2
R5J3
R5J4
R5J5
R5J6
R5J7
R5J8
R5J9
R5K0
R5K1
R5K2
R5K3
R5K4
R5K5
R5K6
R5K7
R5K8
R5K9
R5L0
R5L1
R5L2
R5L3
R5L4
R5L5
R5L6
R5L7
R5L8
R5L9
R5M0
R5M1
R5M2
R5M3
R5M4
R5M5
R5M6
R5M7
R5M8
R5M9
R5N0
R5N1
R5N2
R5N3
R5N4
R5N5
R5N6
R5N7
R5N8
R5N9
R5O0
R5O1
R5O2
R5O3
R5O4
R5O5
R5O6
R5O7
R5O8
R5O9
R5P0
R5P1
R5P2
R5P3
R5P4
R5P5
R5P6
R5P7
R5P8
R5P9
R5Q0
R5Q1
R5Q2
R5Q3
R5Q4
R5Q5
R5Q6
R5Q7
R5Q8
R5Q9
R5R0
R5R1
R5R2
R5R3
R5R4
R5R5
R5R6
R5R7
R5R8
R5R9
R5S0
R5S1
R5S2
R5S3
R5S4
R5S5
R5S6
R5S7
R5S8
R5S9
R5T0
R5T1
R5T2
R5T3
R5T4
R5T5
R5T6
R5T7
R5T8
R5T9
R5U0
R5U1
R5U2
R5U3
R5U4
R5U5
R5U6
R5U7
R5U8
R5U9
R5V0
R5V1
R5V2
R5V3
R5V4
R5V5
R5V6
R5V7
R5V8
R5V9
R5W0
R5W1
R5W2
R5W3
R5W4
R5W5
R5W6
R5W7
R5W8
R5W9
R5X0
R5X1
R5X2
R5X3
R5X4
R5X5
R5X6
R5X7
R5X8
R5X9
R5Y0
R5Y1
R5Y2
R5Y3
R5Y4
R5Y5
R5Y6
R5Y7
R5Y8
R5Y9
R5Z0
R5Z1
R5Z2
R5Z3
R5Z4
R5Z5
R5Z6
R5Z7
R5Z8
R5Z9
R6A0
R6A1
R6A2
R6A3
R6A4
R6A5
R6A6
R6A7
R6A8
R6A9
R6B0
R6B1
R6B2
R6B3
R6B4
R6B5
R6B6
R6B7
R6B8
R6B9
R6C0
R6C1
R6C2
R6C3
R6C4
R6C5
R6C6
R6C7
R6C8
R6C9
R6D0
R6D1
R6D2
R6D3
R6D4
R6D5
R6D6
R6D7
R6D8
R6D9
R6E0
R6E1
R6E2
R6E3
R6E4
R6E5
R6E6
R6E7
R6E8
R6E9
R6F0
R6F1
R6F2
R6F3
R6F4
R6F5
R6F6
R6F7
R6F8
R6F9
R6G0
R6G1
R6G2
R6G3
R6G4
R6G5
R6G6
R6G7
R6G8
R6G9
R6H0
R6H1
R6H2
R6H3
R6H4
R6H5
R6H6
R6H7
R6H8
R6H9
R6I0
R6I1
R6I2
R6I3
R6I4
R6I5
R6I6
R6I7
R6I8
R6I9
R6J0
R6J1
R6J2
R6J3
R6J4
R6J5
R6J6
R6J7
R6J8
R6J9
R6K0
R6K1
R6K2
R6K3
R6K4
R6K5
R6K6
R6K7
R6K8
R6K9
R6L0
R6L1
R6L2
R6L3
R6L4
R6L5
R6L6
R6L7
R6L8
R6L9
R6M0
R6M1
R6M2
R6M3
R6M4
R6M5
R6M6
R6M7
R6M8
R6M9
R6N0
R6N1
R6N2
R6N3
R6N4
R6N5
R6N6
R6N7
R6N8
R6N9
R6O0
R6O1
R6O2
R6O3
R6O4
R6O5
R6O6
R6O7
R6O8
R6O9
R6P0
R6P1
R6P2
R6P3
R6P4
R6P5
R6P6
R6P7
R6P8
R6P9
R6Q0
R6Q1
R6Q2
R6Q3
R6Q4
R6Q5
R6Q6
R6Q7
R6Q8
R6Q9
R6R0
R6R1
R6R2
R6R3
R6R4
R6R5
R6R6
R6R7
R6R8
R6R9
R6S0
R6S1
R6S2
R6S3
R6S4
R6S5
R6S6
R6S7
R6S8
R6S9
R6T0
R6T1
R6T2
R6T3
R6T4
R6T5
R6T6
R6T7
R6T8
R6T9
R6U0
R6U1
R6U2
R6U3
R6U4
R6U5
R6U6
R6U7
R6U8
R6U9
R6V0
R6V1
R6V2
R6V3
R6V4
R6V5
R6V6
R6V7
R6V8
R6V9
R6W0
R6W1
R6W2
R6W3
R6W4
R6W5
R6W6
R6W7
R6W8
R6W9
R6X0
R6X1
R6X2
R6X3
R6X4
R6X5
R6X6
R6X7
R6X8
R6X9
R6Y0
R6Y1
R6Y2
R6Y3
R6Y4
R6Y5
R6Y6
R6Y7
R6Y8
R6Y9
R6Z0
R6Z1
R6Z2
R6Z3
R6Z4
R6Z5
R6Z6
R6Z7
R6Z8
R6Z9
R7A0
R7A1
R7A2
R7A3
R7A4
R7A5
R7A6
R7A7
R7A8
R7A9
R7B0
R7B1
R7B2
R7B3
R7B4
R7B5
R7B6
R7B7
R7B8
R7B9
R7C0
R7C1
R7C2
R7C3
R7C4
R7C5
R7C6
R7C7
R7C8
R7C9
R7D0
R7D1
R7D2
R7D3
R7D4
R7D5
R7D6
R7D7
R7D8
R7D9
R7E0
R7E1
R7E2
R7E3
R7E4
R7E5
R7E6
R7E7
R7E8
R7E9
R7F0
R7F1
R7F2
R7F3
R7F4
R7F5
R7F6
R7F7
R7F8
R7F9
R7G0
R7G1
R7G2
R7G3
R7G4
R7G5
R7G6
R7G7
R7G8
R7G9
R7H0
R7H1
R7H2
R7H3
R7H4
R7H5
R7H6
R7H7
R7H8
R7H9
R7I0
R7I1
R7I2
R7I3
R7I4
R7I5
R7I6
R7I7
R7I8
R7I9
R7J0
R7J1
R7J2
R7J3
R7J4
R7J5
R7J6
R7J7
R7J8
R7J9
R7K0
R7K1
R7K2
R7K3
R7K4
R7K5
R7K6
R7K7
R7K8
R7K9
R7L0
R7L1
R7L2
R7L3
R7L4
R7L5
R7L6
R7L7
R7L8
R7L9
R7M0
R7M1
R7M2
R7M3
R7M4
R7M5
R7M6
R7M7
R7M8
R7M9
R7N0
R7N1
R7N2
R7N3
R7N4
R7N5
R7N6
R7N7
R7N8
R7N9
R7O0
R7O1
R7O2
R7O3
R7O4
R7O5
R7O6
R7O7
R7O8
R7O9
R7P0
R7P1
R7P2
R7P3
R7P4
R7P5
R7P6
R7P7
R7P8
R7P9
R7Q0
R7Q1
R7Q2
R7Q3
R7Q4
R7Q5
R7Q6
R7Q7
R7Q8
R7Q9
R7R0
R7R1
R7R2
R7R3
R7R4
R7R5
R7R6
R7R7
R7R8
R7R9
R7S0
R7S1
R7S2
R7S3
R7S4
R7S5
R7S6
R7S7
R7S8
R7S9
R7T0
R7T1
R7T2
R7T3
R7T4
R7T5
R7T6
R7T7
R7T8
R7T9
R7U0
R7U1
R7U2
R7U3
R7U4
R7U5
R7U6
R7U7
R7U8
R7U9
R7V0
R7V1
R7V2
R7V3
R7V4
R7V5
R7V6
R7V7
R7V8
R7V9
R7W0
R7W1
R7W2
R7W3
R7W4
R7W5
R7W6
R7W7
R7W8
R7W9
R7X0
R7X1
R7X2
R7X3
R7X4
R7X5
R7X6
R7X7
R7X8
R7X9
R7Y0
R7Y1
R7Y2
R7Y3
R7Y4
R7Y5
R7Y6
R7Y7
R7Y8
R7Y9
R7Z0
R7Z1
R7Z2
R7Z3
R7Z4
R7Z5
R7Z6
R7Z7
R7Z8
R7Z9
R8A0
R8A1
R8A2
R8A3
R8A4
R8A5
R8A6
R8A7
R8A8
R8A9
R8B0
R8B1
R8B2
R8B3
R8B4
R8B5
R8B6
R8B7
R8B8
R8B9
R8C0
R8C1
R8C2
R8C3
R8C4
R8C5
R8C6
R8C7
R8C8
R8C9
R8D0
R8D1
R8D2
R8D3
R8D4
R8D5
R8D6
R8D7
R8D8
R8D9
R8E0
R8E1
R8E2
R8E3
R8E4
R8E5
R8E6
R8E7
R8E8
R8E9
R8F0
R8F1
R8F2
R8F3
R8F4
R8F5
R8F6
R8F7
R8F8
R8F9
R8G0
R8G1
R8G2
R8G3
R8G4
R8G5
R8G6
R8G7
R8G8
R8G9
R8H0
R8H1
R8H2
R8H3
R8H4
R8H5
R8H6
R8H7
R8H8
R8H9
R8I0
R8I1
R8I2
R8I3
R8I4
R8I5
R8I6
R8I7
R8I8
R8I9
R8J0
R8J1
R8J2
R8J3
R8J4
R8J5
R8J6
R8J7
R8J8
R8J9
R8K0
R8K1
R8K2
R8K3
R8K4
R8K5
R8K6
R8K7
R8K8
R8K9
R8L0
R8L1
R8L2
R8L3
R8L4
R8L5
R8L6
R8L7
R8L8
R8L9
R8M0
R8M1
R8M2
R8M3
R8M4
R8M5
R8M6
R8M7
R8M8
R8M9
R8N0
R8N1
R8N2
R8N3
R8N4
R8N5
R8N6
R8N7
R8N8
R8N9
R8O0
R8O1
R8O2
R8O3
R8O4
R8O5
R8O6
R8O7
R8O8
R8O9
R8P0
R8P1
R8P2
R8P3
R8P4
R8P5
R8P6
R8P7
R8P8
R8P9
R8Q0
R8Q1
R8Q2
R8Q3
R8Q4
R8Q5
R8Q6
R8Q7
R8Q8
R8Q9
R8R0
R8R1
R8R2
R8R3
R8R4
R8R5
R8R6
R8R7
R8R8
R8R9
R8S0
R8S1
R8S2
R8S3
R8S4
R8S5
R8S6
R8S7
R8S8
R8S9
R8T0
R8T1
R8T2
R8T3
R8T4
R8T5
R8T6
R8T7
R8T8
R8T9
R8U0
R8U1
R8U2
R8U3
R8U4
R8U5
R8U6
R8U7
R8U8
R8U9
R8V0
R8V1
R8V2
R8V3
R8V4
R8V5
R8V6
R8V7
R8V8
R8V9
R8W0
R8W1
R8W2
R8W3
R8W4
R8W5
R8W6
R8W7
R8W8
R8W9
R8X0
R8X1
R8X2
R8X3
R8X4
R8X5
R8X6
R8X7
R8X8
R8X9
R8Y0
R8Y1
R8Y2
R8Y3
R8Y4
R8Y5
R8Y6
R8Y7
R8Y8
R8Y9
R8Z0
R8Z1
R8Z2
R8Z3
R8Z4
R8Z5
R8Z6
R8Z7
R8Z8
R8Z9
R9A0
R9A1
R9A2
R9A3
R9A4
R9A5
R9A6
R9A7
R9A8
R9A9
R9B0
R9B1
R9B2
R9B3
R9B4
R9B5
R9B6
R9B7
R9B8
R9B9
R9C0
R9C1
R9C2
R9C3
R9C4
R9C5
R9C6
R9C7
R9C8
R9C9
R9D0
R9D1
R9D2
R9D3
R9D4
R9D5
R9D6
R9D7
R9D8
R9D9
R9E0
R9E1
R9E2
R9E3
R9E4
R9E5
R9E6
R9E7
R9E8
R9E9
R9F0
R9F1
R9F2
R9F3
R9F4
R9F5
R9F6
R9F7
R9F8
R9F9
R9G0
R9G1
R9G2
R9G3
R9G4
R9G5
R9G6
R9G7
R9G8
R9G9
R9H0
R9H1
R9H2
R9H3
R9H4
R9H5
R9H6
R9H7
R9H8
R9H9
R9I0
R9I1
R9I2
R9I3
R9I4
R9I5
R9I6
R9I7
R9I8
R9I9
R9J0
R9J1
R9J2
R9J3
R9J4
R9J5
R9J6
R9J7
R9J8
R9J9
R9K0
R9K1
R9K2
R9K3
R9K4
R9K5
R9K6
R9K7
R9K8
R9K9
R9L0
R9L1
R9L2
R9L3
R9L4
R9L5
R9L6
R9L7
R9L8
R9L9
R9M0
R9M1
R9M2
R9M3
R9M4
R9M5
R9M6
R9M7
R9M8
R9M9
R9N0
R9N1
R9N2
R9N3
R9N4
R9N5
R9N6
R9N7
R9N8
R9N9
R9O0
R9O1
R9O2
R9O3
R9O4
R9O5
R9O6
R9O7
R9O8
R9O9
R9P0
R9P1
R9P2
R9P3
R9P4
R9P5
R9P6
R9P7
R9P8
R9P9
R9Q0
R9Q1
R9Q2
R9Q3
R9Q4
R9Q5
R9Q6
R9Q7
R9Q8
R9Q9
R9R0
R9R1
R9R2
R9R3
R9R4
R9R5
R9R6
R9R7
R9R8
R9R9
R9S0
R9S1
R9S2
R9S3
R9S4
R9S5
R9S6
R9S7
R9S8
R9S9
R9T0
R9T1
R9T2
R9T3
R9T4
R9T5
R9T6
R9T7
R9T8
R9T9
R9U0
R9U1
R9U2
R9U3
R9U4
R9U5
R9U6
R9U7
R9U8
R9U9
R9V0
R9V1
R9V2
R9V3
R9V4
R9V5
R9V6
R9V7
R9V8
R9V9
R9W0
R9W1
R9W2
R9W3
R9W4
R9W5
R9W6
R9W7
R9W8
R9W9
R9X0
R9X1
R9X2
R9X3
R9X4
R9X5
R9X6
R9X7
R9X8
R9X9
R9Y0
R9Y1
R9Y2
R9Y3
R9Y4
R9Y5
R9Y6
R9Y7
R9Y8
R9Y9
R9Z0
R9Z1
R9Z2
R9Z3
R9Z4
R9Z5
R9Z6
R9Z7
R9Z8
R9Z9
RA0
RA1
RA2
RA3
RA4
RA5
RA6
RA7
RA8
RA9
RB0
RB1
RB2
RB3
RB4
RB5
RB6
RB7
RB8
RB9
RC0
RC1
RC2
RC3
RC4
RC5
RC6
RC7
RC8
RC9
RD0
RD1
RD2
RD3
RD4
RD5
RD6
RD7
RD8
RD9
RE0
RE1
RE2
RE3
RE4
RE5
RE6
RE7
RE8
RE9
RF0
RF1
RF2
RF3
RF4
RF5
RF6
RF7
RF8
RF9
RG0
RG1
RG2
RG3
RG4
RG5
RG6
RG7
RG8
RG9
RH0
RH1
RH2
RH3
RH4
RH5
RH6
RH7
RH8
RH9
RI0
RI1
RI2
RI3
RI4
RI5
RI6
RI7
RI8
RI9
RJ0
RJ1
RJ2
RJ3
RJ4
RJ5
RJ6
RJ7
RJ8
RJ9
RK0
RK1
RK2
RK3
RK4
RK5
RK6
RK7
RK8
RK9
RL0
RL1
RL2
RL3
RL4
RL5
RL6
RL7
RL8
RL9
RM0
RM1
RM2
RM3
RM4
RM5
RM6
RM7
RM8
RM9
RN0
RN1
RN2
RN3
RN4
RN5
RN6
RN7
RN8
RN9
RO0
RO1
RO2
RO3
RO4
RO5
RO6
RO7
RO8
RO9
RP0
RP1
RP2
RP3
RP4
RP5
RP6
RP7
RP8
RP9
RQ0
RQ1
RQ2
RQ3
RQ4
RQ5
RQ6
RQ7
RQ8
RQ9
RR0
RR1
RR2
RR3
RR4
RR5
RR6
RR7
RR8
RR9
RS0
RS1
RS2
RS3
RS4
RS5
RS6
RS7
RS8
RS9
RT0
RT1
RT2
RT3
RT4
RT5
RT6
RT7
RT8
RT9
RU0
RU1
RU2
RU3
RU4
RU5
RU6
RU7
RU8
RU9
RV0
RV1
RV2
RV3
RV4
RV5
RV6
RV7
RV8
RV9
RW0
RW1
RW2
RW3
RW4
RW5
RW6
RW7
RW8
RW9
RX0
RX1
RX2
RX3
RX4
RX5
RX6
RX7
RX8
RX9
RY0
RY1
RY2
RY3
RY4
RY5
RY6
RY7
RY8
RY9
RZ0
RZ1
RZ2
RZ3
RZ4
RZ5
RZ6
RZ7
RZ8
RZ9
RA0
RA1
RA2
RA3
RA4
RA5
RA6
RA7
RA8
RA9
RB0
RB1
RB2
RB3
RB4
RB5
RB6
RB7
RB8
RB9
RC0
RC1
RC2
RC3
RC4
RC5
RC6
RC7
RC8
RC9
RD0
RD1
RD2
RD3
RD4
RD5
RD6
RD7
RD8
RD9
RE0
RE1
RE2
RE3
RE4
RE5
RE6
RE7
RE8
RE9
RF0
RF1
RF2
RF3
RF4
RF5
RF6
RF7
RF8
RF9
RG0
RG1
RG2
RG3
RG4
RG5
RG6
RG7
RG8
RG9
RH0
RH1
RH2
RH3
RH4
RH5
RH6
RH7
RH8
RH9
RI0
RI1
RI2
RI3
RI4
RI5
RI6
RI7
RI8
RI9
RJ0
RJ1
RJ2
RJ3
RJ4
RJ5
RJ6
RJ7
RJ8
RJ9
RK0
RK1
RK2
RK3
RK4
RK5
RK6
RK7
RK8
RK9
RL0
RL1
RL2
RL3
RL4
RL5
RL6
RL7
RL8
RL9
RM0
RM1
RM2
RM3
RM4
RM5
RM6
RM7
RM8
RM9
RN0
RN1
RN2
RN3
RN4
RN5
RN6
RN7
RN8
RN9
RO0
RO1
RO2
RO3
RO4
RO5
RO6
RO7
RO8
RO9
RP0
RP1
RP2
RP3
RP4
RP5
RP6
RP7
RP8
RP9
RQ0
RQ1
RQ2
RQ3
RQ4
RQ5
RQ6
RQ7
RQ8
RQ9
RR0
RR1
RR2
RR3
RR4
RR5
RR6
RR7
RR8
RR9
RS0
RS1
RS2
RS3
RS4
RS5
RS6
RS7
RS8
RS9
RT0
RT1
RT2
RT3
RT4
RT5
RT6
RT7
RT8
RT9
RU0
RU1
RU2
RU3
RU4
RU5
RU6
RU7
RU8
RU9
RV0
RV1
RV2
RV3
RV4
RV5
RV6
RV7
RV8
RV9
RW0
RW1
RW2
RW3
RW4
RW5
RW6
RW7
RW8
RW9
RX0
RX1
RX2
RX3
RX4
RX5
RX6
RX7
RX8
RX9
RY0
RY1
RY2
RY3
RY4
RY5
RY6
RY7
RY8
RY9
RZ0
RZ1
RZ2
RZ3
RZ4
RZ5
RZ6
RZ7
RZ8
RZ9
RA0
RA1
RA2
RA3
RA4
RA5
RA6
RA7
RA8
RA9
RB0
RB1
RB2
RB3
RB4
RB5
RB6
RB7
RB8
RB9
RC0
RC1
RC2
RC3
RC4
RC5
RC6
RC7
RC8
RC9
RD0
RD1
RD2
RD3
RD4
RD5
RD6
RD7
RD8
RD9
RE0
RE1
RE2
RE3
RE4
RE5







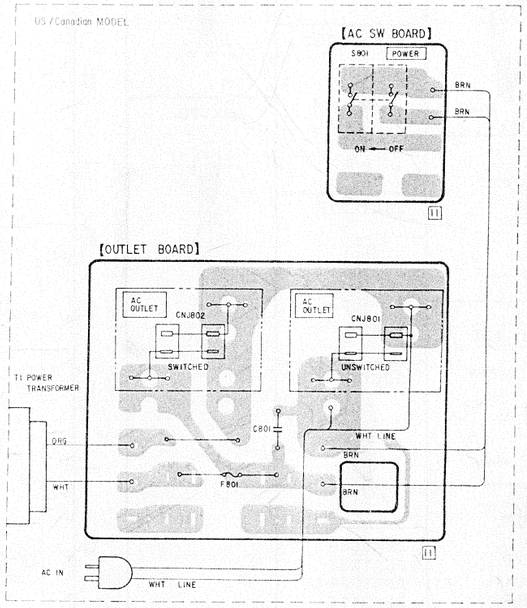


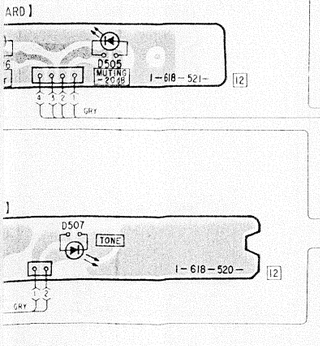


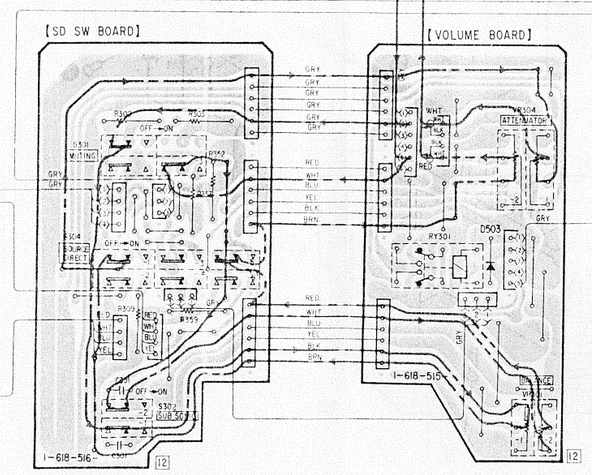
Q	D
602	
604,603,501	605,602 501,502
601	
605	601

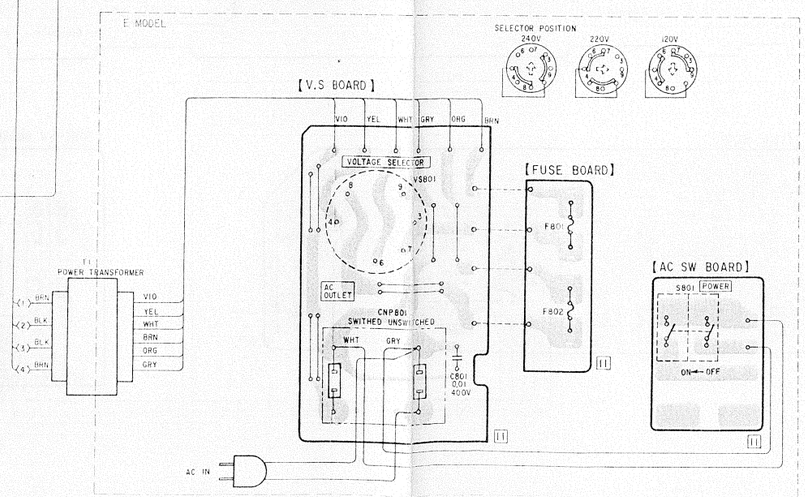
Note on Mounting Diagram

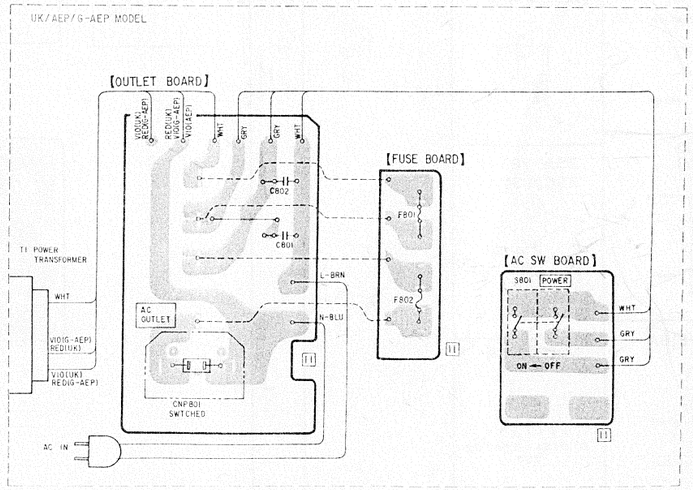
- : signal path
- : L-CH signal path
- : R-CH signal path





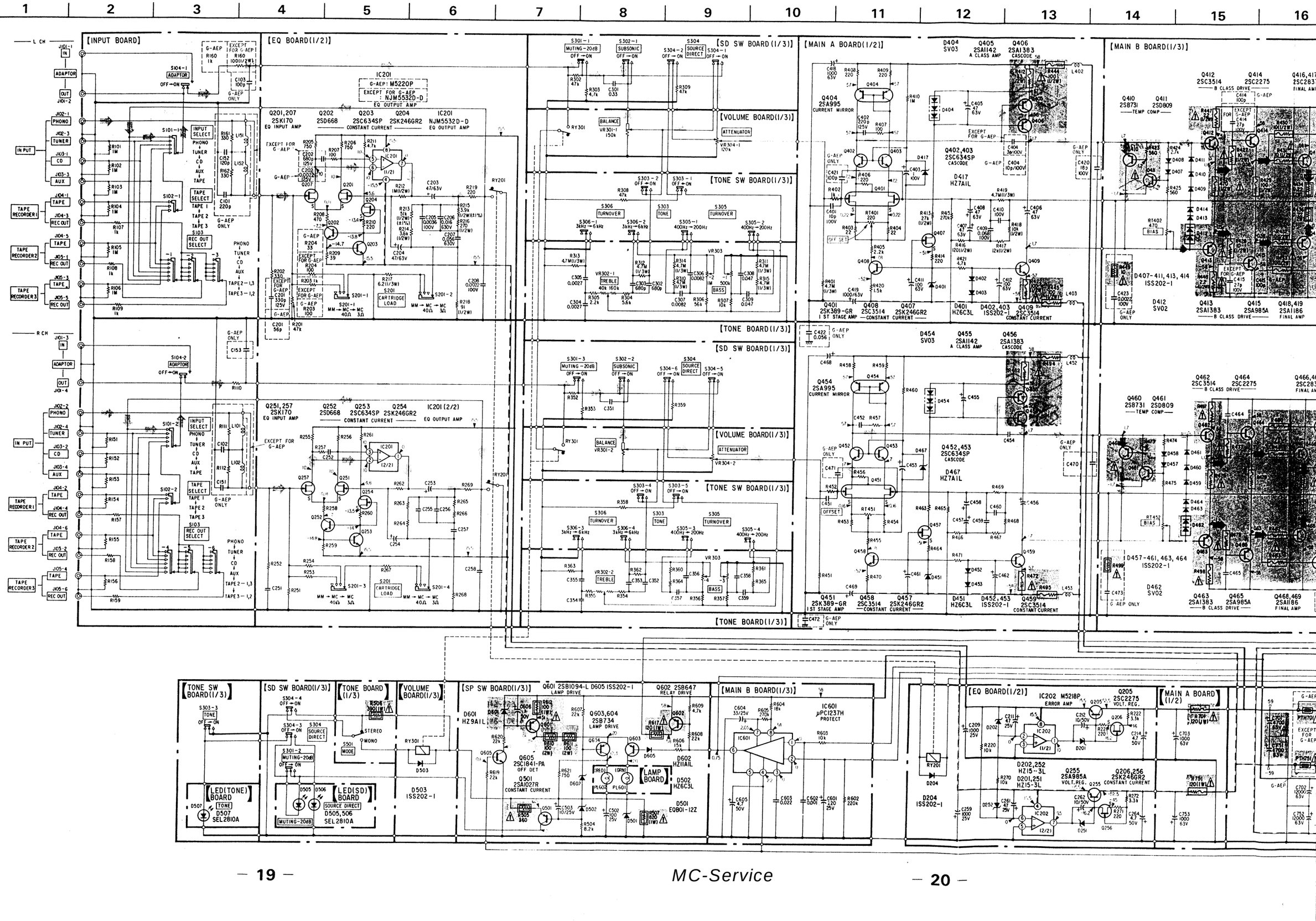


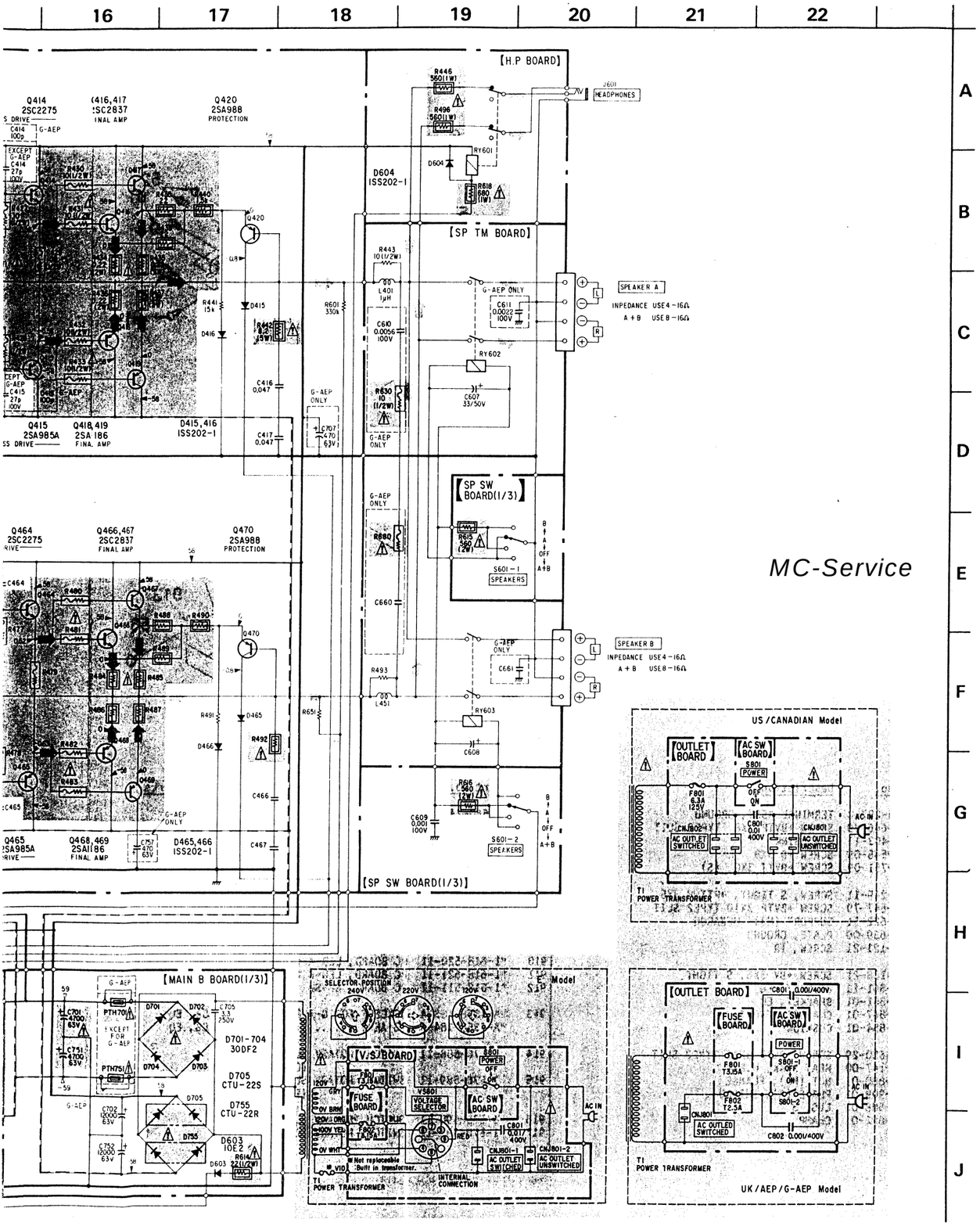




MC-Service

4-2. SCHEMATIC DIAGRAM





MC-Service

Note on Schematic Diagram

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- ⇨ : signal path.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

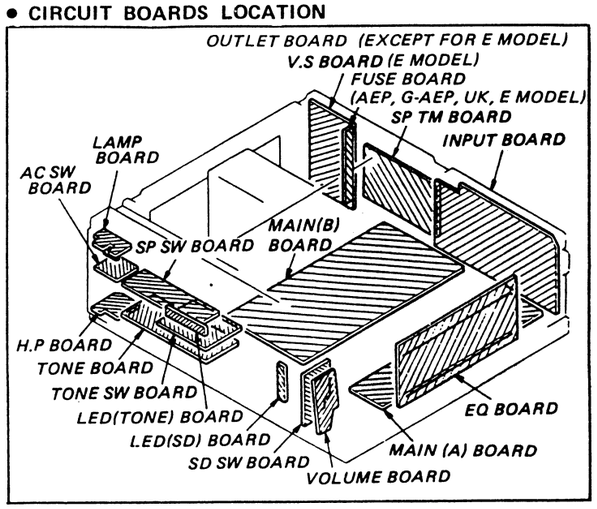
Note: Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- Components for right channel have same values as for left channel.
- ⊣▭⊢ : nonflammable resistor.
- ⊣∿⊢ : fusible resistor.
- Switch

Ref. No.	Switch	Position
S101	INPUT SELECT	PHONE
S102	TAPE SELECT	TAPE 1
S103	REC OUT SELECT	PHONO
S104	ADAPTOR	OFF
S201	CARTRIDGE LOAD	MM
S301	MUTING –20dB	OFF
S302	SUBSONIC	OFF
S303	TONE	OFF
S304	SOURCE DIRECT	OFF
S305	TURN OVER	400Hz
S306	TURN OVER	3kHz
S501	MODE	STEREO
S601	SPEAKER	A
S801	POWER	OFF
VS809	VOLTAGE SELECTOR (E MODEL)	–

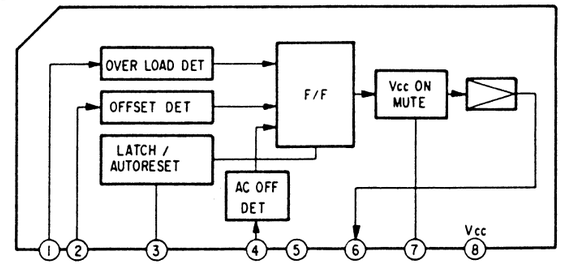
- ▬▬ : B+ bus.
- ▬ ▬ : B– bus.
- ▭ : adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50 kΩ/V).
- Voltage variations may be noted due to normal production tolerances.

• CIRCUIT BOARDS LOCATION



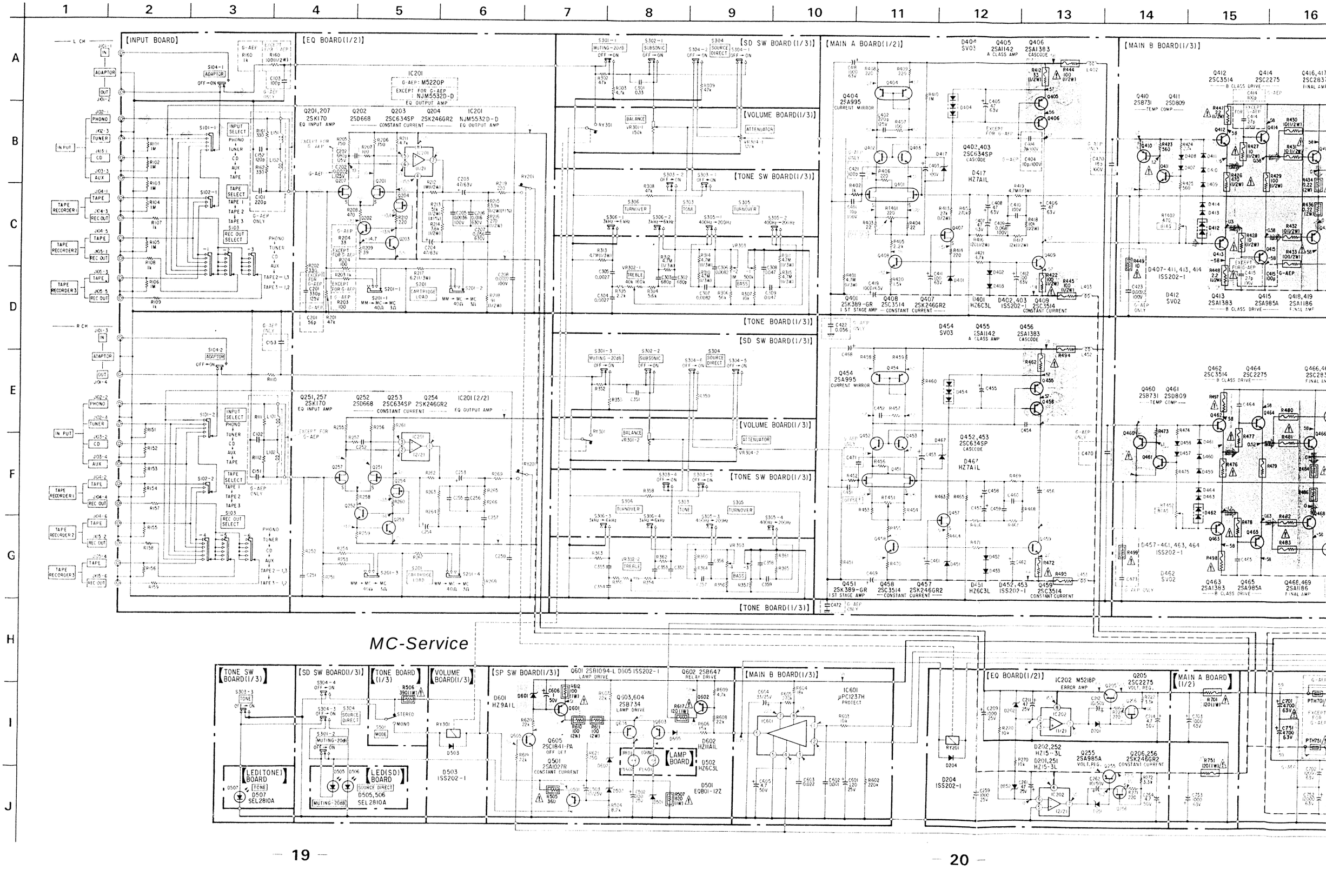
IC BLOCK DIAGRAM

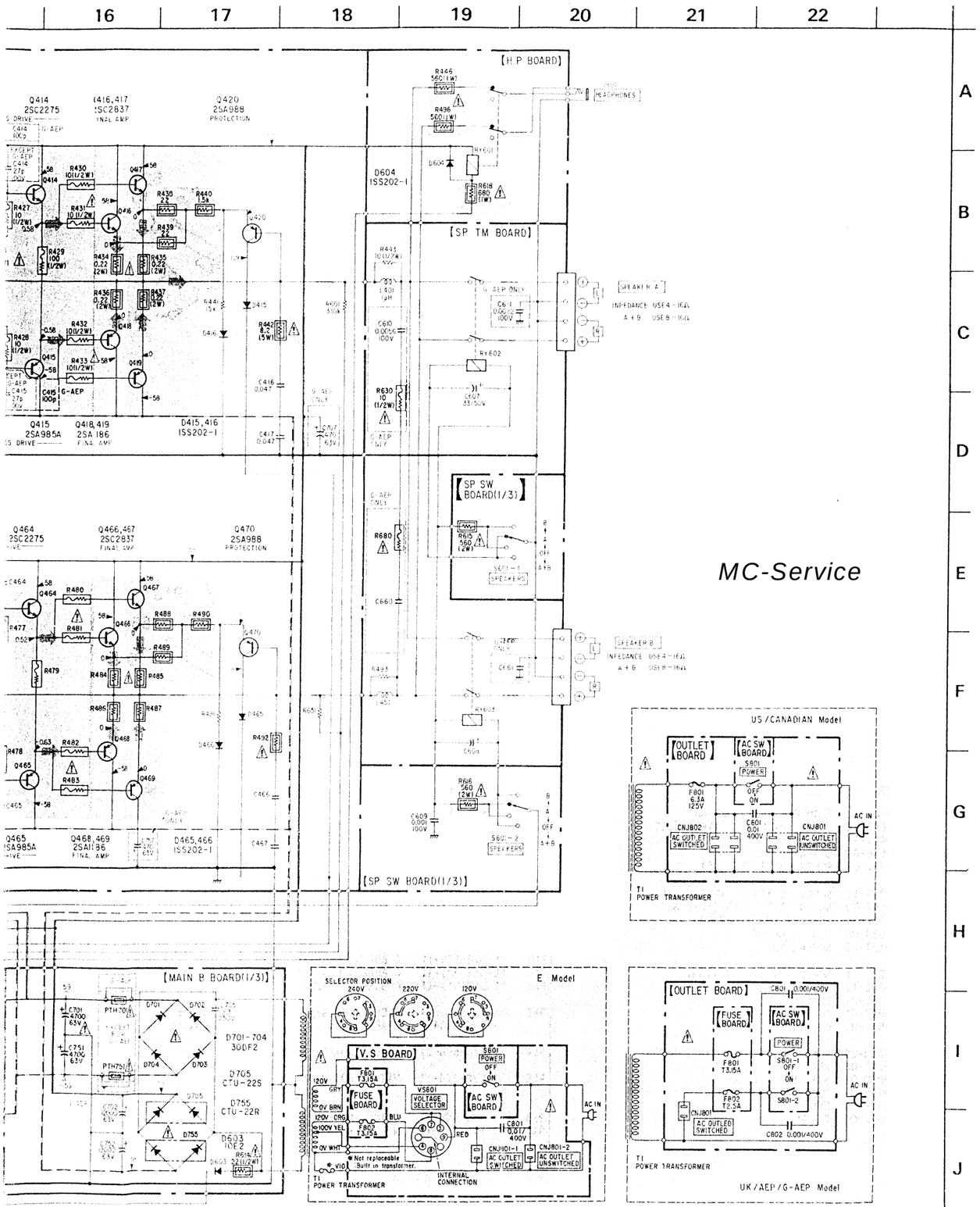
μPC1237H



MC-Service

4-2. SCHEMATIC DIAGRAM





MC-Service

Note on Schematic Diagram

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ⇨ : signal path.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

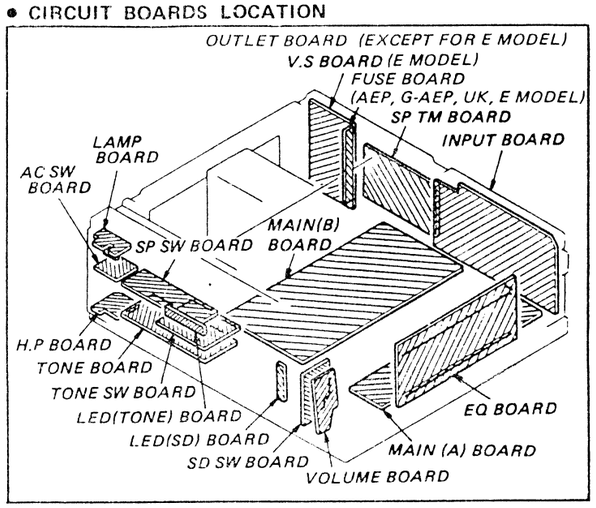
Note: Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- Components for right channel have same values as for left channel.
- ⏛ : nonflammable resistor.
- ⏦ : fusible resistor.
- Switch

Ref. No.	Switch	Position
S101	INPUT SELECT	PHONE
S102	TAPE SELECT	TAPE 1
S103	REC OUT SELECT	PHONO
S104	ADAPTOR	OFF
S201	CARTRIDGE LOAD	MM
S301	MUTING –20dB	OFF
S302	SUBSONIC	OFF
S303	TONE	OFF
S304	SOURCE DIRECT	OFF
S305	TURN OVER	400Hz
S306	TURN OVER	3kHz
S501	MODE	STEREO
S601	SPEAKER	A
S801	POWER	OFF
VS809	VOLTAGE SELECTOR (E MODEL)	–

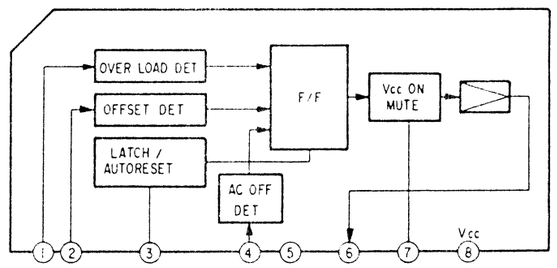
- ▭ : B+ bus.
- ▭ : B– bus.
- ▭ : adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50 kΩ/V).
- Voltage variations may be noted due to normal production tolerances.

● CIRCUIT BOARDS LOCATION



IC BLOCK DIAGRAM

μPC1237H

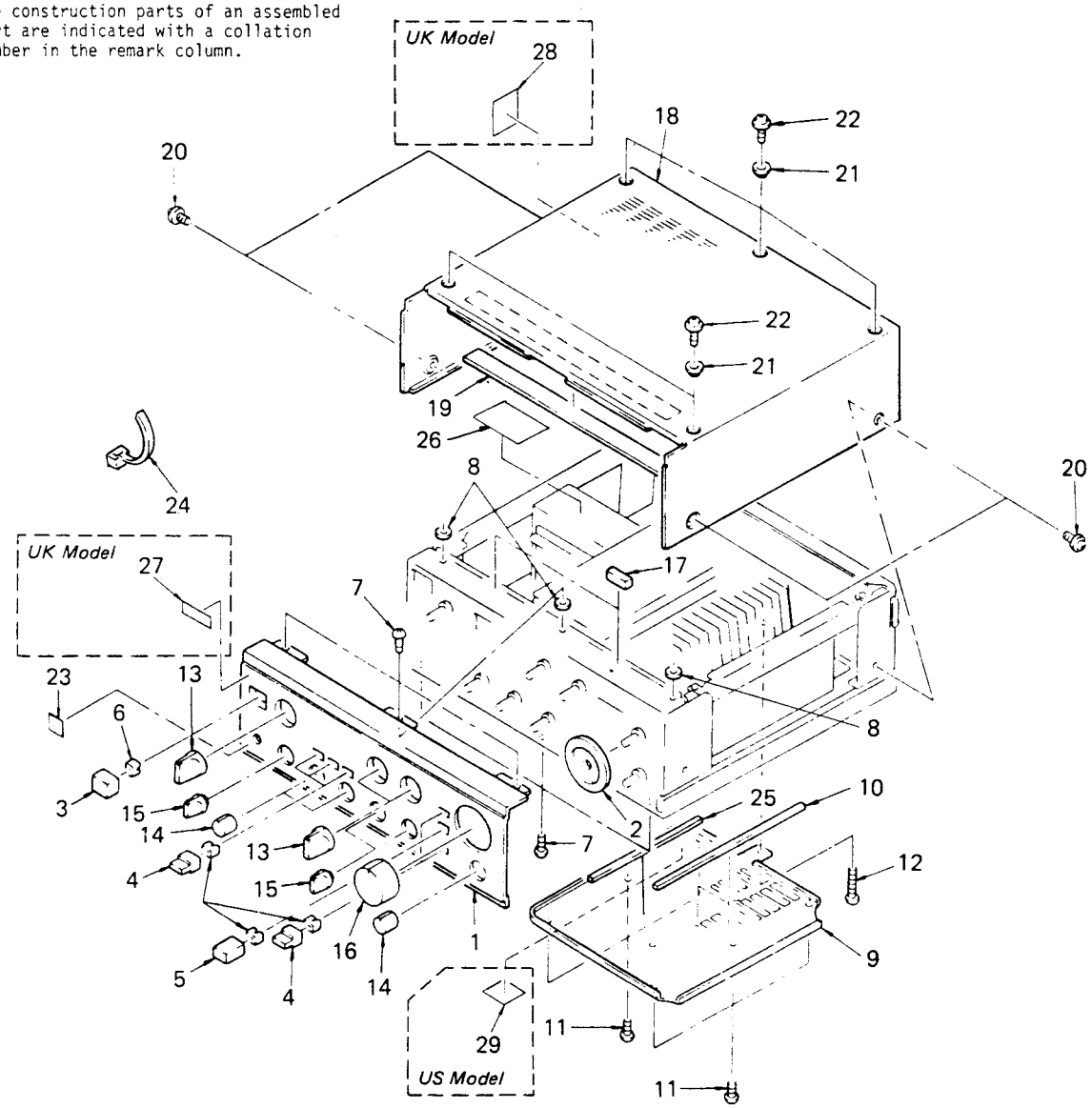


SECTION 5
EXPLODED VIEWS AND PARTS LIST

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

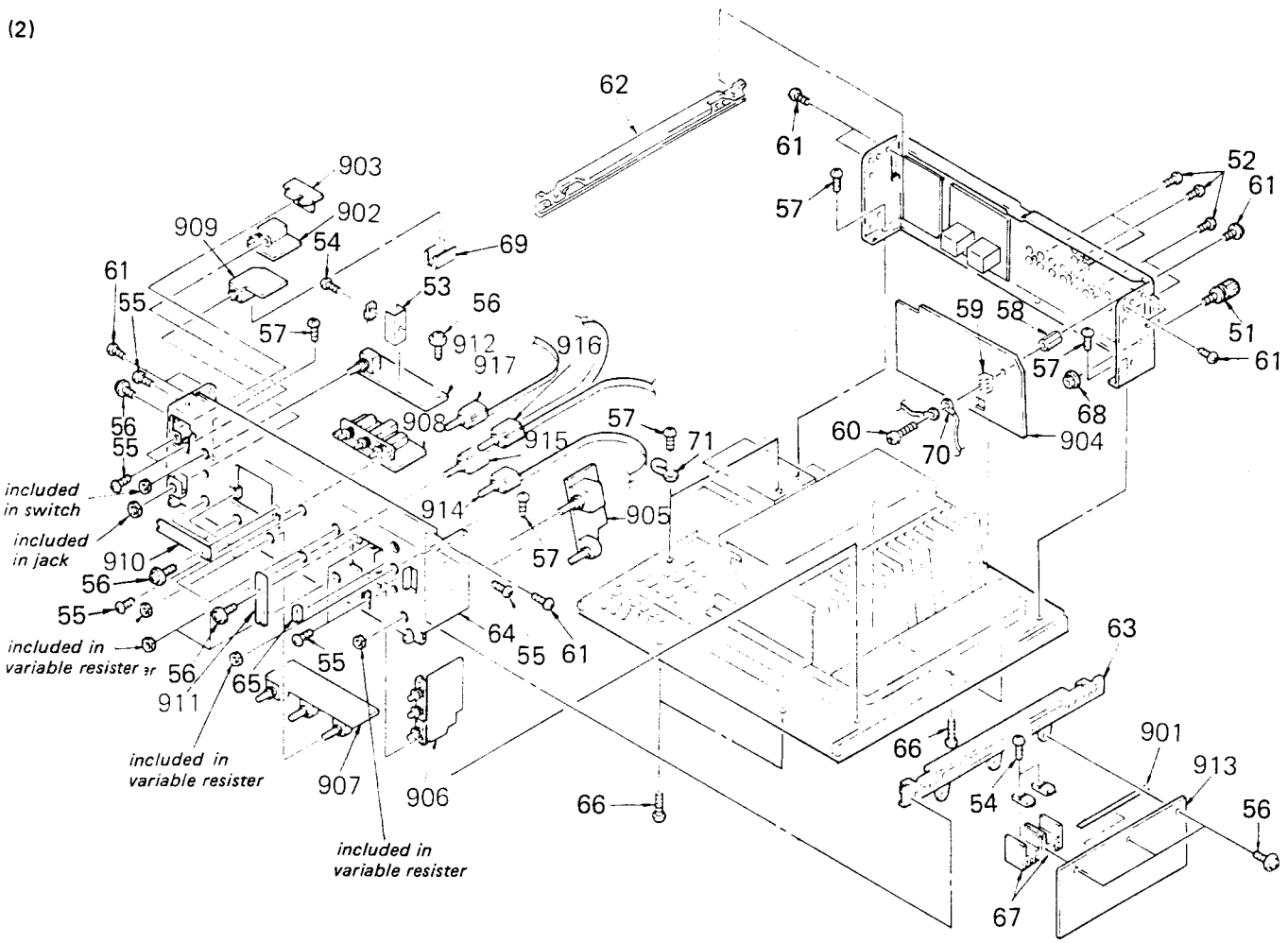
(1)



No.	Part No.	Description	Remarks
1	A-4322-860-A	(EXCEPT FOR E)...PANEL ASSY, FRONT	
	A-4322-872-A	(E).. .....PANEL ASSY, FRONT	
2	4-908-857-01	RING (DIA.48), ORNAMENTAL	
3	4-908-856-01	KNOB, SQUARE	
4	3-315-105-21	KNOB (5X16), SQUARE	
5	4-908-875-01	KNOB, SQUARE	
6	4-864-307-00	RING	
7	7-685-751-09	SCREW +BVTT 3X6 (S)	
8	3-311-623-11	SPACER	
9	*4-908-865-01	PLATE, BOTTOM	
10	4-916-872-11	DAMPER	
11	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT	
12	7-685-153-29	SCREW +P 3X30 TYPE2 SLIT	
13	4-908-859-01	(EXCEPT FOR E)...KNOB (NA-29)	
	4-916-706-01	(E).....KNOB (NA-29)	
14	4-908-860-01	KNOB (NA-22), R	
15	4-908-858-01	KNOB (NA-22), FLAT	

No.	Part No.	Description	Remarks
16	4-916-705-01	(EXCEPT FOR E)...KNOB (NA-48), R	
	4-916-705-01	(E).....KNOB (NA-48), R	
17	*4-908-872-01	CUSHION	
18	4-908-868-01	CASE	
19	4-916-782-01	DAMPER	
20	4-849-802-00	SCREW	
21	3-576-298-11	ESCUTCHEON	
22	3-703-249-11	SCREW, S TIGHT, +PTTWH 3X6	
23	3-703-710-41	STICKER, SONY SYMBOL (12)	
24	3-655-653-21	BAND (TAITON), BINDING	
25	4-916-702-21	DAMPER	
26	4-908-885-01	LABEL, TRANSFORMER	
27	3-701-690-00	(UK)...LABEL (MADE IN JAPAN)	
28	3-703-079-21	(UK)...LABEL, CAUTION (BACK)	
29	3-703-680-00	(US)...LABEL, CAUTION, SUB, NEW UL	

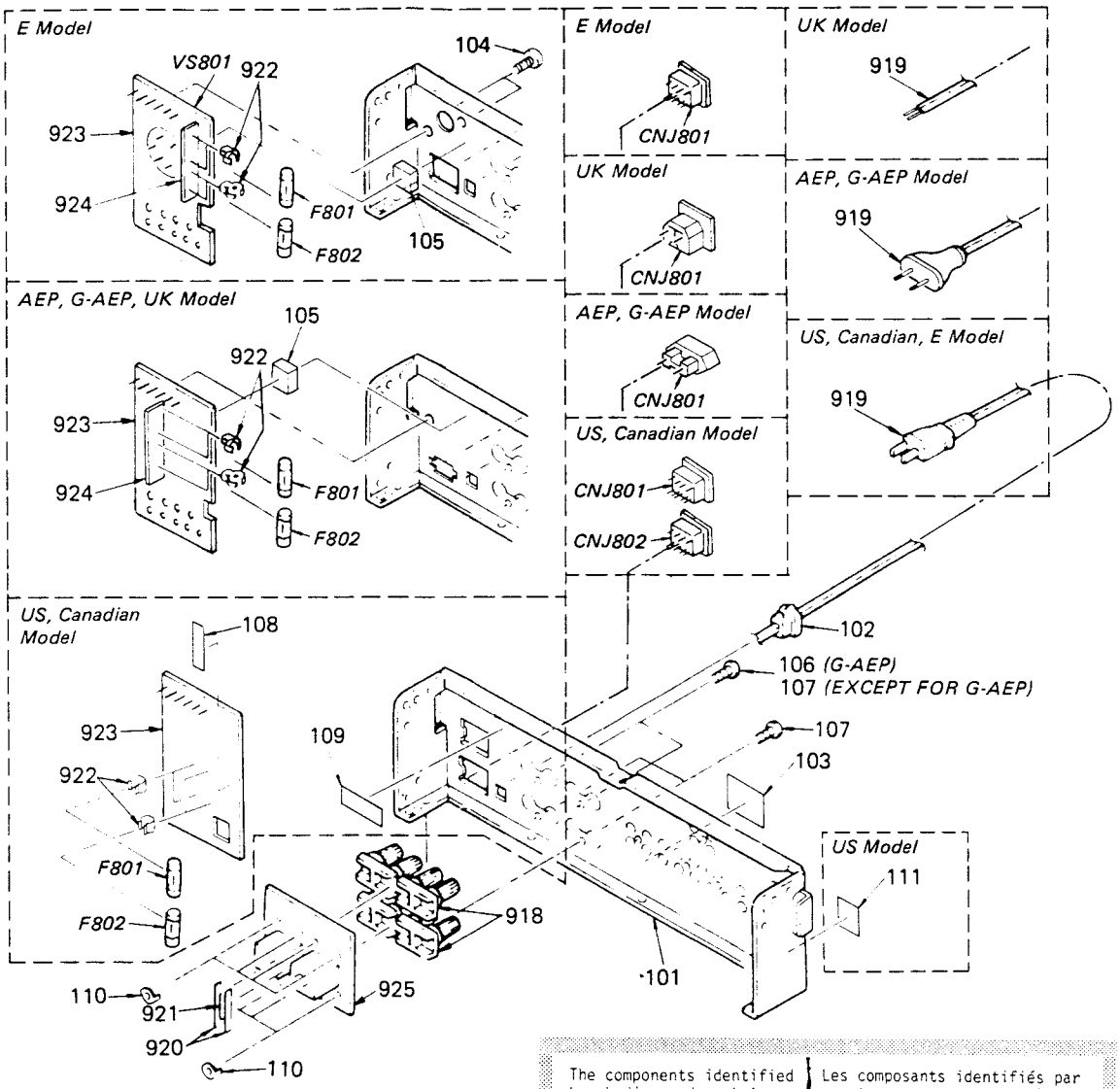
(2)



No.	Part No.	Description	Remarks
51	X-4854-207-0	TERMINAL ASSY, GROUND	
52	7-685-646-29	SCREW +BVTP 3X8 TYPE2 SLIT	
53	*4-880-403-11	HEAT SINK	
54	7-682-548-09	SCREW +B 3X8	
55	7-685-751-09	SCREW +BVTT 3X6 (S)	
56	3-703-249-11	SCREW, S TIGHT, +PTTWH 3X6	
57	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT	
58	*2-280-622-51	SUPPORT (M3), HEXAGON	
59	*4-835-639-00	PLATE, GROUND	
60	2-259-121-21	SCREW, TR	
61	3-703-108-21	SCREW +BV 3X6, S TIGHT	
62	*4-908-861-11	BRACKET, EQ	
63	*4-908-861-01	BRACKET, EQ	
64	*4-908-867-01	CHASSIS, FRONT	
65	*4-908-854-01	CUSHION	
66	7-685-650-29	SCREW +BVTP 3X16 TYPE2 SLIT	
67	*4-363-147-00	HEAT SINK, H.PIN	
68	4-908-880-01	NUT (M3), FLANGE	
69	*4-904-909-01	PLATE (A), SHIELD	
70	7-623-508-01	LUG, 3	
71	4-908-882-01	CLAMP	

No.	Part No.	Description	Remarks
901	*1-560-242-71	BUS BAR 6P	
902	*1-618-512-11	PC BOARD, AC-SW	
903	*1-618-513-11	PC BOARD, LAMP	
904	*1-618-514-11	PC BOARD, INPUT	
905	*1-618-515-11	PC BOARD, VR	
906	*1-618-516-11	PC BOARD, S.D	
907	*1-618-517-11	PC BOARD, TONE	
908	*1-618-518-11	PC BOARD, TONE-SW	
909	*1-618-519-11	PC BOARD, H.P	
910	*1-618-520-11	PC BOARD, LED-A (TONE)	
911	*1-618-521-11	PC BOARD, LED-B (S.D)	
912	*1-618-511-11	PC BOARD, SP-SW	
913	*A-4358-183-A	(EXCEPT FOR G-AEP)...MOUNTED PCB, EQ	
	*A-4358-184-A	(G-AEP).....MOUNTED PCB, EQ	
914	1-570-588-11	SWITCH, ROTARY SLIDE (REMOTE) (CARTRIDGE LOAD)	
915	1-570-589-11	SWITCH, ROTARY SLIDE (REMOTE) (REC OUT SELECT)	
916	1-570-590-11	SWITCH, ROTARY SLIDE (REMOTE)	
917	1-570-591-11	SWITCH, ROTARY SLIDE (REMOTE) (TAPE SELECT)	

(3)

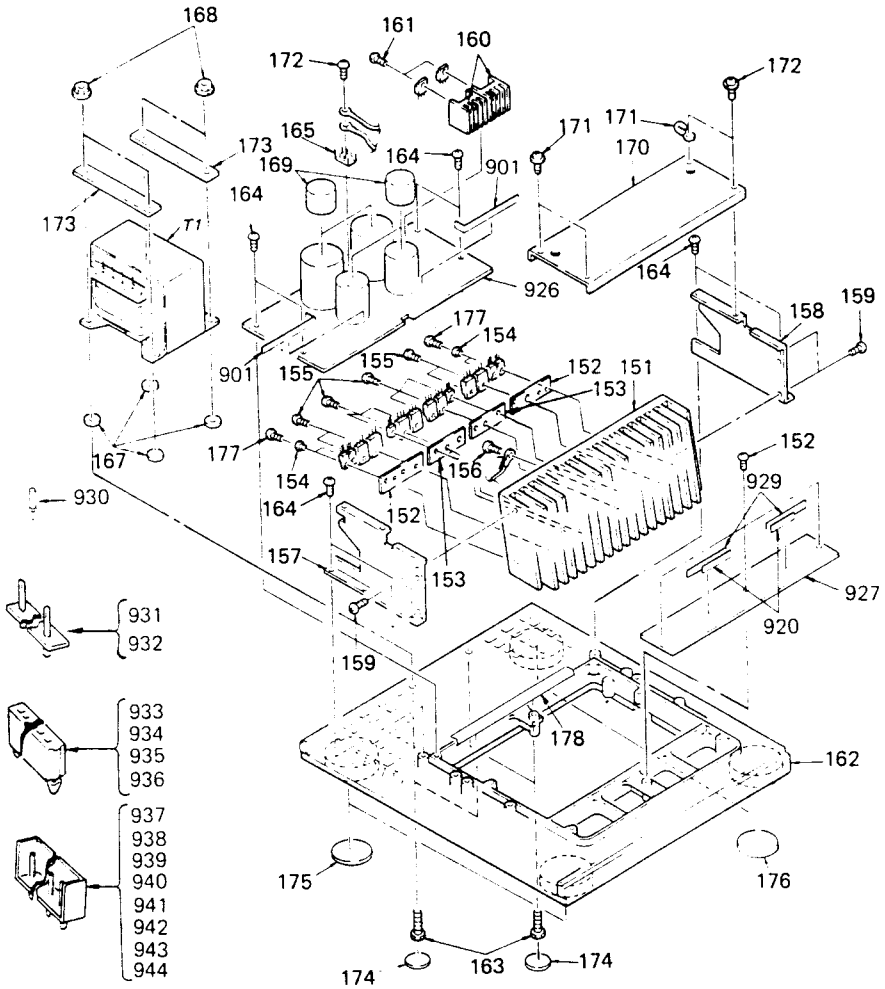


The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	Remarks
101	*4-908-866-21	(AEP).....PLATE, JACK	
	*4-908-866-31	(G-AEP).....PLATE, JACK	
	*4-908-866-41	(UK).....PLATE, JACK	
	*4-908-866-51	(E).....PLATE, JACK	
	*4-916-871-01	(US,Canadian)...PLATE, JACK	
102	2-371-561-00	(US,Canadian)....BUSHING, (P) INSULTING	
	3-703-244-00	(E).....BUSHING (2104), CORD	
	4-916-783-01	(AEP,G-AEP,UK)...BUSHING, CORD PA	
103	*4-908-896-01	(US).....LABEL, MODEL NUMBER	
	*4-908-897-01	(Canadian)...LABEL, MODEL NUMBER	
	*4-908-898-01	(AEP).....LABEL, MODEL NUMBER	
	*4-908-899-02	(UK).....LABEL, MODEL NUMBER	
	*4-916-701-01	(E).....LABEL, MODEL NUMBER	
	*4-916-702-02	(G-AEP).....LABEL, MODEL NUMBER	
104	7-685-871-09	(E)...SCREW +BVTT 3X6 BZn	
105	4-916-707-01	(AEP,G-AEP,UK,E)...CUSHION	
106	4-887-711-21	(G-AEP)...SCREW, TERMINAL, CLAW, +BVTP	
107	7-685-646-29	SCREW +BVTP 3X8 TYPE2 SLIT	
108	3-701-946-28	(US,Canadian)...LABEL, FUSE	
109	3-703-044-26	(US,Canadian)...LABEL, CAUTION	
110	*4-843-416-11	PLATE, FIXED, CAP	
111	3-703-680-00	(US)....LABEL, CAUTION, SUB, NEW UL	
918	1-536-767-21	TERMINAL BOARD, SPEAKER	

No.	Part No.	Description	Remarks
919	⚠1-555-386-00	(E).....CORD, POWER	
	⚠1-557-577-11	(US,Canadian)...CORD, POWER	
	⚠1-559-271-11	(AEP,G-AEP).....CORD, POWER	
	⚠1-559-272-11	(UK).....CORD, POWER	
920	*1-560-242-11	BUS BAR 3P	
921	*1-560-242-61	BUS BAR 2P	
922	⚠1-533-183-11	(AEP,G-AEP,UK,E)...HOLDER, FUSE	
	⚠1-553-185-11	(US,Canadian).....HOLDER, FUSE	
923	*1-618-523-11	(US,Canadian)....PC BOARD, OUTLET	
	*1-619-928-11	(E).....PC BOARD, V.S	
	*1-619-930-11	(AEP,G-AEP,UK)...PC BOARD, OUTLET	
924	*1-619-929-11	(E).....PC BOARD, FUSE (E)	
	*1-619-931-11	(AEP,G-AEP,UK)...PC BOARD, FUSE	
925	*1-618-522-11	PC BOARD, SP-TM	
CNJ801	⚠1-526-751-00	(UK).....OUTLET AC	
CNJ801	⚠1-526-794-11	(AEP,G-AEP).....OUTLET AC	
CNJ801	⚠1-526-883-00	(US,Canadian,E)...OUTLET AC	
CNJ802	⚠1-526-883-00	(US,Canadian).....OUTLET AC	
F801	⚠1-532-237-00	(AEP,G-AEP,UK,E)...FUSE, TIME-LAG 3.15A	
F801	⚠1-532-883-00	(US,Canadian).....FUSE, GLASS 6.3A	
F802	⚠1-532-237-00	(E).....FUSE, GLASS 3.15A	
F802	⚠1-532-286-00	(AEP,G-AEP,UK)...FUSE, TIME-LAG 2.5A	
F802	⚠1-532-883-00	(US,Canadian).....FUSE, GLASS 6.3A	
VS801	⚠1-526-576-31	(E)...SELECTOR, POWER VOLTAGE	

(4)



The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	Remarks
151	*4-908-874-11	HEAT SINK	
152	4-916-709-01	SHEET (B), INSULATING	
153	4-916-708-01	SHEET (A), INSULATING	
154	2-371-561-00	BUSHING (P), INSULATING	
155	7-682-549-09	SCREW +B 3X10	
156	7-682-561-10	SCREW +B 4X8	
157	*4-908-863-01	BRACKET (FRONT), HEAT SINK	
158	*4-908-864-01	BRACKET (REAR), HEAT SINK	
159	7-685-646-29	SCREW +BVTP 3X8 TYPE2 SLIT	
160	*4-363-147-00	HEAT SINK, H.PIN	
161	7-682-548-09	SCREW +B 3X8	
162	X-4885-922-1	CHASSIS, MAIN ASSY	
163	7-683-333-07	BOLT, HEXAGON 4X40	
164	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT	
165	*4-880-404-01	PLATE, GROUND	
166	7-685-648-29	SCREW +BVTP 3X12 TYPE2 SLIT	
167	*4-885-984-01	WASHER	
168	4-908-881-01	NUT (M4), FLANGE	
169	*4-908-853-01	CUSHION	
170	*4-908-862-01	RETAINER, CHEMICAL CAPACITOR	
171	*4-908-882-01	CLAMP	
172	3-703-249-11	SCREW, S TIGHT, +PTTWH 3X6	
173	*4-908-886-01	REINFORCEMENT, TRANSFORMER	
174	*4-908-892-01	SPACER	
175	*4-908-888-01	(US,Canadian,AEP,UK)...FOOT, TUNING	
	*4-916-704-01	(G-AEP,E).....FOOT	
176	*4-908-887-01	(US,Canadian,AEP,UK)...FOOT, TUNING	
	*4-916-704-11	(G-AEP,E).....FOOT	
177	7-682-649-09	SCREW +PS 3X10	
178	4-916-763-01	(US)...SHEET, INSULATING	

No.	Part No.	Description	Remarks
901	*1-560-242-71	BUS BAR 6P	
920	*1-560-242-11	BUS BAR 3P	
926	*A-4388-584-A	(EXCEPT FOR G-AEP) ...MOUNTED PCB, MAIN (B)	
	*A-4388-585-A	(G-AEP)....MOUNTED PCB, MAIN (B)	
927	*A-4388-582-A	(EXCEPT FOR G-AEP) ....MOUNTED PCB, MAIN (A)	
	*A-4388-583-A	(G-AEP)....MOUNTED PCB, MAIN (A)	
929	*1-560-242-21	BUS BAR 4P	
930	*1-535-492-00	PIN, GT	
931	*1-508-809-00	BASE POST (14MM) 2P	
932	*1-535-136-00	(AEP,G-AEP,UK,E) ....BASE POST 14MM (10MM PITCH) 3P	
933	*1-562-249-00	SOCKET, CONNECTOR 4P	
934	*1-562-250-00	SOCKET, CONNECTOR 5P	
935	*1-562-251-00	SOCKET, CONNECTOR 6P	
936	*1-562-327-00	SOCKET, CONNECTOR 3P	
937	*1-564-505-11	PLUG, CONNECTOR 2P, WHITE	
938	*1-564-505-31	PLUG, CONNECTOR 2P, RED	
939	*1-564-506-11	PLUG, CONNECTOR 3P, WHITE	
940	*1-564-507-11	PLUG, CONNECTOR 4P, WHITE	
941	*1-564-507-21	PLUG, CONNECTOR 4P, BLACK	
942	*1-564-507-31	PLUG, CONNECTOR 4P, RED	
943	*1-564-508-11	PLUG, CONNECTOR 5P, WHITE	
944	*1-564-509-11	PLUG, CONNECTOR 6P, WHITE	
T1	⚠1-448-631-11	(UK,G-AEP).....TRANSFORMER, POWER	
T1	⚠1-448-632-11	(E).....TRANSFORMER, POWER	
T1	⚠1-448-633-11	(US,Canadian)...TRANSFORMER, POWER	
T1	⚠1-448-634-11	(AEP).....TRANSFORMER, POWER	

MC-Service

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	*1-560-242-71	BUS BAR 6P
902	*1-618-512-11	PC BOARD, AC-SW
903	*1-618-513-11	PC BOARD, LAMP
904	*1-618-514-11	PC BOARD, INPUT
905	*1-618-515-11	PC BOARD, VR
906	*1-618-516-11	PC BOARD, S.D
907	*1-618-517-11	PC BOARD, TONE
908	*1-618-518-11	PC BOARD, TONE-SW
909	*1-618-519-11	PC BOARD, H.P
910	*1-618-520-11	PC BOARD, LED-A (TONE)
911	*1-618-521-11	PC BOARD, LED-B (S.D)
912	*1-618-511-11	PC BOARD, SP-SW
913	*A-4358-183-A	(US,Canadian,AEP,UK,E)..MOUNTED PCB, EQ
	*A-4358-184-A	(G-AEP).....MOUNTED PCB, EQ
914	1-570-588-11	SWITCH, ROTARY SLIDE (REMOTE)
915	1-570-589-11	SWITCH, ROTARY SLIDE (REMOTE)
916	1-570-590-11	SWITCH, ROTARY SLIDE (REMOTE)
917	1-570-591-11	SWITCH, ROTARY SLIDE (REMOTE)
918	1-536-767-21	TERMINAL BOARD, SPEAKER
919	**⚠1-555-386-00**	**(E).....CORD, POWER**
	⚠1-557-577-11	**(US,Canadian)...CORD, POWER**
	⚠1-559-271-11	**(AEP,G-AEP).....CORD, POWER**
	⚠1-559-272-00	**(UK).....CORD, POWER**
920	*1-560-242-11	BUS BAR 3P
921	*1-560-242-61	BUS BAR 2P
922	**⚠1-533-183-11**	**(AEP,G-AEP,UK,E)...HOLDER, FUSE**
	⚠1-533-185-11	**(US,Canadian).....HOLDER, FUSE**
923	*1-618-523-11	(US,Canadian)....PC BOARD, OUTLET
	*1-619-928-11	(E).....PC BOARD, V.S
	*1-619-930-11	(AEP,G-AEP,UK)...PC BOARD, OUTLET
924	*1-619-929-11	(E).....PC BOARD, FUSE (E)
	*1-619-931-11	(AEP,G-AEP,UK)...PC BOARD, FUSE (E)
925	*1-618-522-11	PC BOARD, SP-TM
926	*A-4388-584-A	(EXCEPT FOR G-AEP)..MOUNTED PCB, MAIN(B)
	*A-4388-585-A	(G-AEP).....MOUNTED PCB, MAIN(B)
927	*A-4388-582-A	(EXCEPT FOR G-AEP)..MOUNTED PCB, MAIN(A)
	*A-4388-583-A	(G-AEP).....MOUNTED PCB, MAIN(A)
929	*1-560-242-21	BUS BAR 4P
930	*1-535-492-00	PIN, GT
931	*1-508-809-00	BASE POST (14MM) 2P
932	*1-535-136-00	BASE POST 14MM (10MM PITCH) 3P
933	*1-562-249-00	SOCKET, CONNECTOR 4P
934	*1-562-250-00	SOCKET, CONNECTOR 5P
935	*1-562-251-00	SOCKET, CONNECTOR 6P

ELECTRICAL PARTS

Ref.No.	Part No.	Description
936	*1-562-327-00	SOCKET, CONNECTOR 3P
937	*1-564-505-11	PLUG, CONNECTOR 2P, WHITE
938	*1-564-505-31	PLUG, CONNECTOR 2P, RED
939	*1-564-506-11	PLUG, CONNECTOR 3P, WHITE
940	*1-564-507-11	PLUG, CONNECTOR 4P, WHITE
941	*1-564-507-21	PLUG, CONNECTOR 4P, BLACK
942	*1-564-507-31	PLUG, CONNECTOR 4P, RED
943	*1-564-508-11	PLUG, CONNECTOR 5P, WHITE
944	*1-564-509-11	PLUG, CONNECTOR 6P, WHITE
C101	1-161-315-00	(G-AEP)...CERAMIC 220PF 10% 50V
C102	1-161-272-00	(G-AEP)...CERAMIC 120PF 5% 50V
C103	1-107-309-00	(G-AEP)...MICA 100PF 5% 500V
C151	1-161-315-00	(G-AEP)...CERAMIC 220PF 10% 50V
C152	1-161-272-00	(G-AEP)...CERAMIC 120PF 5% 50V
C153	1-107-309-00	(G-AEP)...MICA 100PF 5% 500V
C201	1-104-249-11	(EXCEPT FOR G-AEP) ...POLYSTYRENE 330PF 5% 125V
C201	1-107-294-00	(G-AEP)...MICA 56PF 5% 100V
C202	1-104-150-00	(EXCEPT FOR G-AEP) ...POLYSTYRENE 680PF 5% 125V
C202	1-104-151-00	(G-AEP)...POLYSTYRENE 0.0022MF 5% 125V
C203	1-123-373-00	ELECT 47MF 20% 63V
C204	1-123-373-00	ELECT 47MF 20% 63V
C205	1-136-267-11	FILM 0.0036MF 3% 100V
C206	1-130-206-00	FILM 0.016MF 2% 630V
C207	1-130-205-00	FILM 0.056MF 2% 630V
C208	1-130-281-00	FILM 0.0022MF 5% 100V
C209	1-123-337-00	ELECT 1000MF 20% 25V
C211	1-123-332-00	ELECT 47MF 20% 25V
C212	1-123-356-00	ELECT 10MF 20% 50V
C214	1-123-369-00	ELECT 4.7MF 20% 50V
C251	1-104-249-11	(EXCEPT FOR G-AEP) ...POLYSTYRENE 330PF 5% 125V
C251	1-107-294-00	(G-AEP)...MICA 56PF 5% 100V
C252	1-104-150-00	(EXCEPT FOR G-AEP) ...POLYSTYRENE 680PF 5% 25V
C252	1-104-151-00	(G-AEP)...POLYSTYRENE 0.0022MF 5% 125V
C253	1-123-373-00	ELECT 47MF 20% 63V
C254	1-123-373-00	ELECT 47MF 20% 63V
C255	1-136-267-11	FILM 0.0036MF 3% 100V
C256	1-130-206-00	FILM 0.016MF 2% 630V
C257	1-130-205-00	FILM 0.056MF 2% 630V
C258	1-130-281-00	FILM 0.0022MF 5% 100V
C259	1-123-337-00	ELECT 1000MF 20% 25V
C261	1-123-332-00	ELECT 47MF 20% 25V
C262	1-123-356-00	ELECT 10MF 20% 50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C264	1-123-369-00	ELECT	4.7MF	20%	50V
C301	1-136-171-00	FILM	0.33MF	5%	50V
C302	1-110-219-11	MYLAR	680PF	5%	50V
C303	1-110-219-11	MYLAR	680PF	5%	50V
C304	1-110-200-00	MYLAR	0.0027MF	5%	50V
C305	1-110-200-00	MYLAR	0.0027MF	5%	50V
C306	1-110-206-00	MYLAR	0.0082MF	5%	50V
C307	1-110-206-00	MYLAR	0.0082MF	5%	50V
C308	1-136-161-00	FILM	0.047MF	5%	50V
C309	1-136-161-00	FILM	0.047MF	5%	50V
C351	1-136-171-00	FILM	0.33MF	5%	50V
C352	1-110-219-11	MYLAR	680PF	5%	50V
C353	1-110-219-11	MYLAR	680PF	5%	50V
C354	1-110-200-00	MYLAR	0.0027MF	5%	50V
C355	1-110-200-00	MYLAR	0.0027MF	5%	50V
C356	1-110-206-00	MYLAR	0.0082MF	5%	50V
C357	1-110-206-00	MYLAR	0.0082MF	5%	50V
C358	1-136-161-00	FILM	0.047MF	5%	50V
C359	1-136-161-00	FILM	0.047MF	5%	50V
C401	1-107-279-00	MICA	10PF	0.5PF	100V
C402	1-104-233-00	POLYSTYRENE	220PF	5%	125V
C403	1-123-380-00	ELECT	1MF	20%	100V
C404	1-107-276-11	(EXCEPT FOR G-AEP)..MICA	3PF	0.5PF	100V
C404	1-107-279-00	(G-AEP).....MICA	10PF	0.5PF	100V
C405	1-123-373-00	ELECT	47MF	20%	63V
C406	1-123-373-00	ELECT	47MF	20%	63V
C407	1-123-373-00	ELECT	47MF	20%	63V
C408	1-123-373-00	ELECT	47MF	20%	63V
C409	1-130-317-00	FILM	0.068MF	5%	100V
C410	1-107-279-00	MICA	10PF	0.5PF	100V
C411	1-123-374-00	ELECT	100MF	20%	63V
C412	1-123-374-00	ELECT	100MF	20%	63V
C414	1-107-169-00	(G-AEP).....MICA	27PF	5%	100V
C414	1-107-286-00	(EXCEPT FOR G-AEP)..MICA	100PF	5%	100V
C414	1-107-169-00	(G-AEP).....MICA	27PF	5%	100V
C415	1-107-286-00	(EXCEPT FOR G-AEP)..MICA	27PF	5%	100V
C416	1-136-161-00	FILM	0.047MF	5%	50V
C417	1-136-161-00	FILM	0.047MF	5%	50V
C418	1-123-378-00	ELECT	1000MF	20%	63V
C419	1-123-378-00	ELECT	1000MF	20%	63V
C420	1-107-282-91	(G-AEP)...MICK	18PF	5%	100V
C421	1-107-169-00	(G-AEP)...MICA	100PF	5%	100V
C422	1-136-162-00	(G-AEP)...FILM	0.056MF	5%	50V
C423	1-136-230-00	(G-AEP)...FILM	0.0022MF	5%	100V
C451	1-107-279-00	MICA	10PF	0.5PF	100V
C452	1-104-233-00	POLYSTYRENE	220PF	5%	125V
C453	1-123-380-00	ELECT	1MF	20%	100V
C454	1-107-202-00	(G-AEP).....MICA	10PF	0.5PF	100V
C454	1-107-276-11	(EXCEPT FOR G-AEP)..MICA	3PF	0.5PF	100V
C455	1-123-373-00	ELECT	47MF	20%	63V
C456	1-123-373-00	ELECT	47MF	20%	63V
C457	1-123-373-00	ELECT	47MF	20%	63V
C458	1-123-373-00	ELECT	47MF	20%	63V
C459	1-130-317-00	FILM	0.068MF	5%	100V
C460	1-107-279-00	MICA	10PF	0.5PF	100V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C461	1-123-374-00	ELECT	100MF	20%	63V
C462	1-123-374-00	ELECT	100MF	20%	63V
C464	1-107-169-00	(G-AEP).....MICA	100PF	5%	100V
C464	1-107-286-00	(EXCEPT FOR G-AEP)..MICA	27PF	5%	100V
C465	1-107-169-00	(G-AEP).....MICA	100PF	5%	100V
C465	1-107-286-00	(EXCEPT FOR G-AEP)..MICA	27PF	5%	100V
C466	1-136-161-00	FILM	0.047MF	5%	50V
C467	1-136-161-00	FILM	0.047MF	5%	50V
C468	1-123-378-00	ELECT	1000MF	20%	63V
C469	1-123-378-00	ELECT	1000MF	20%	63V
C470	1-107-282-91	(G-AEP).....MICA	18PF	5%	100V
C471	1-107-169-00	(G-AEP).....MICA	100PF	5%	100V
C472	1-163-162-00	(G-AEP).....FILM	0.056MF	5%	50V
C473	1-163-230-00	(G-AEP).....FILM	0.0022MF	5%	100V
C502	1-123-333-00	ELECT	100MF	20%	25V
C601	1-123-334-00	ELECT	220MF	20%	25V
C602	1-110-195-00	MYLAR	0.001MF	5%	50V
C603	1-136-157-00	FILM	0.022MF	5%	50V
C604	1-123-343-00	ELECT	33MF	20%	25V
C605	1-123-369-00	ELECT	4.7MF	20%	50V
C606	**⚠1-123-380-00**	**ELECT**	**1MF**	**20%**	**50V**
C607	1-123-382-00	ELECT	33MF	20%	50V
C608	1-123-382-00	ELECT	33MF	20%	50V
C609	1-130-273-00	FILM	0.001MF	5%	100V
C610	1-130-291-00	(G-AEP).....FILM	0.0056MF	5%	100V
C611	1-136-230-00	(G-AEP).....FILM	0.0022MF	5%	100V
C660	1-130-291-00	(G-AEP).....FILM	0.0056MF	5%	100V
C661	1-136-230-00	(G-AEP).....FILM	0.0022MF	5%	100V
C701	**⚠1-125-431-11**	**ELECT**	**4700MF**	**20%**	**63V**
C702	1-125-381-00	ELECT	12000MF	20%	63V
C703	1-123-378-00	ELECT	1000MF	20%	63V
C705	1-130-801-11	FILM	3.3MF	10%	250V
C707	1-123-377-00	(G-AEP)...ELECT	470MF	20%	63V
C751	**⚠1-125-431-11**	**ELECT**	**4700MF**	**20%**	**63V**
C752	1-125-381-00	ELECT	12000MF	20%	63V
C753	1-123-378-00	ELECT	1000MF	20%	63V
C757	1-123-377-00	(G-AEP)...ELECT	470MF	20%	63V
C801	**⚠1-161-741-00**	**CERAMIC**	**0.001MF**	**10%**	**400V**
C802	**⚠1-161-741-00**	**(UK,AEP,G-AEP,E)... CERAMIC**	**0.001MF**	**10%**	**400V**
C999	1-136-167-00	FILM	0.15MF	5%	50V
CNJ801	**⚠1-526-751-00**	**(UK).....OUTLET, AC**			
CNJ801	**⚠1-526-794-11**	**(AEP,G-AEP).....OUTLET, AC**			
CNJ801	**⚠1-526-883-00**	**(US,Canadian,E)...OUTLET, AC**			
CNJ802	**⚠1-526-883-00**	**(US,Canadian,E)...OUTLET, AC**			
D201	8-719-910-53	DIODE HZ15-3L			
D202	8-719-910-53	DIODE HZ15-3L			
D204	8-719-940-76	DIODE 1SS132			
D251	8-719-910-53	DIODE HZ15-3L			
D252	8-719-910-53	DIODE HZ15-3L			
D401	8-719-910-69	DIODE HZ6C3L			
D402	8-719-940-76	DIODE 1SS132			
D403	8-719-940-76	DIODE 1SS132			
D404	8-719-300-03	DIODE SV-03			
D407	8-719-940-76	DIODE 1SS132			

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D408	8-719-940-76	DIODE 1SS132
D409	8-719-940-76	DIODE 1SS132
D410	8-719-940-76	DIODE 1SS132
D411	8-719-940-76	DIODE 1SS132
D412	**⚠ 8-719-300-02**	**DIODE SV-02**
D413	8-719-940-76	DIODE 1SS132
D414	8-719-940-76	DIODE 1SS132
D415	8-719-940-76	DIODE 1SS132
D416	8-719-940-76	DIODE 1SS132
D417	8-719-910-65	DIODE HZ7B2L
D451	8-719-910-69	DIODE HZ6C3L
D452	8-719-940-76	DIODE 1SS132
D453	8-719-940-76	DIODE 1SS132
D454	8-719-300-03	DIODE SV-03
D457	8-719-940-76	DIODE 1SS132
D458	8-719-940-76	DIODE 1SS132
D459	8-719-940-76	DIODE 1SS132
D460	8-719-940-76	DIODE 1SS132
D461	8-719-940-76	DIODE 1SS132
D462	**⚠ 8-719-300-02**	**DIODE SV-02**
D463	8-719-940-76	DIODE 1SS132
D464	8-719-940-76	DIODE 1SS132
D465	8-719-940-76	DIODE 1SS132
D466	8-719-940-76	DIODE 1SS132
D467	8-719-910-65	DIODE HZ7B2L
D501	8-719-930-12	DIODE EQB01-12Z
D502	8-719-910-69	DIODE HZ6C3L
D503	8-719-940-76	DIODE 1SS132
D505	8-719-301-49	DIODE SEL2810A
D506	8-719-301-49	DIODE SEL2810A
D507	8-719-301-49	DIODE SEL2810A
D601	**⚠ 8-719-910-75**	**DIODE HZ9B2L**
D602	8-719-910-11	DIODE HZ11A1L
D603	8-719-200-77	DIODE 10E2N
D604	8-719-940-76	DIODE 1SS132
D605	8-719-940-76	DIODE 1SS132
D701	**⚠ 8-719-230-02**	**DIODE 30DF2**
D702	**⚠ 8-719-230-02**	**DIODE 30DF2**
D703	**⚠ 8-719-230-02**	**DIODE 30DF2**
D704	**⚠ 8-719-230-02**	**DIODE 30DF2**
D705	**⚠ 8-719-300-27**	**DIODE CTU-22S**
D755	**⚠ 8-719-300-25**	**DIODE CTU-22R**
F801	**⚠ 1-532-237-00**	**(AEP,G-AEP,UK,E)..FUSE, TIME-LAG, 3.15A**
F801	**⚠ 1-532-883-00**	**(US,Canadian).....FUSE, GLASS 6.3A**
F802	**⚠ 1-532-237-00**	**(E).....FUSE, TIME-LAG, 3.15A**
F802	**⚠ 1-532-286-00**	**(AEP,G-AEP,UK)...FUSE, TIME-LAG, 2.5A**
F802	**⚠ 1-532-883-00**	**(US,Canadian)....FUSE, GLASS 6.3A**
J101	1-507-830-21	JACK, PIN 4P (ADAPTOR)
J102	1-507-830-00	JACK, PIN 4P (INPUT PHONO/TUNER)
J103	1-507-830-00	JACK, PIN 4P (INPUT/CD/AUX)
J104	1-507-831-00	JACK, PIN 6P (TAPE RECORDER 1/2)
J105	1-507-831-00	JACK, PIN 6P (TAPE RECORDER 2/3)
J601	1-507-707-00	JACK, LARGE TYPE (HEADPHONES)
IC201	8-759-602-01	(G-AEP).....IC M5220P
IC201	8-759-701-21	(EXCEPT FOR G-AEP)...IC NJM5532D-D
IC202	8-759-601-02	IC M5218P
IC601	8-759-101-23	IC UPC1237H

ELECTRICAL PARTS

Ref.No.	Part No.	Description
L101	1-413-101-00	(G-AEP)...COIL, INPUT
L102	1-413-101-00	(G-AEP)...COIL, INPUT
L151	1-413-101-00	(G-AEP)...COIL, INPUT
L152	1-413-101-00	(G-AEP)...COIL, INPUT
L401	*1-422-009-13	COIL, AIR-CORE
L402	1-422-261-11	COIL, AIR-CORE
L403	1-422-261-11	COIL, AIR-CORE
L451	*1-422-009-13	COIL, AIR-CORE
L452	1-422-261-11	COIL, AIR-CORE
L453	1-422-261-11	COIL, AIR-CORE
PTH701	**⚠ 1-806-882-11**	**(EXCEPT FOR G-AEP) ...THERMISTOR (POSITIVE)**
PTH751	**⚠ 1-806-882-11**	**(EXCEPT FOR G-AEP) ...THERMISTOR (POSITIVE)**
PL601	1-518-518-41	LAMP, PILOT
PL602	1-518-518-41	LAMP, PILOT
Q201	8-729-217-03	TRANSISTOR 2SK170
Q202	8-729-366-81	TRANSISTOR 2SD668
Q203	8-729-600-27	TRANSISTOR 2SC634SP
Q204	8-729-201-56	TRANSISTOR 2SK246-GR2
Q205	8-729-127-53	TRANSISTOR 2SC2275-P
Q206	8-729-201-56	TRANSISTOR 2SK246-GR2
Q207	8-729-217-03	TRANSISTOR 2SK170
Q251	8-729-217-03	TRANSISTOR 2SK170
Q252	8-729-366-81	TRANSISTOR 2SD668
Q253	8-729-600-27	TRANSISTOR 2SC634SP
Q254	8-729-201-56	TRANSISTOR 2SK246-GR2
Q255	8-729-190-53	TRANSISTOR 2SA985A
Q256	8-729-201-56	TRANSISTOR 2SK246-GR2
Q257	8-729-217-03	TRANSISTOR 2SK170
Q401	8-729-203-21	TRANSISTOR 2SK389-GR
Q402	8-729-600-27	TRANSISTOR 2SC634SP
Q403	8-729-600-27	TRANSISTOR 2SC634SP
Q404	8-729-699-51	TRANSISTOR 2SA995
Q405	**⚠ 8-729-114-22**	**TRANSISTOR 2SA1142**
Q406	**⚠ 8-729-104-91**	**TRANSISTOR 2SA1383**
Q407	8-729-201-56	TRANSISTOR 2SK246-GR2
Q408	8-729-104-18	TRANSISTOR 2SC3514
Q409	8-729-104-18	TRANSISTOR 2SC3514
Q410	**⚠ 8-729-173-13**	**TRANSISTOR 2SB731**
Q411	**⚠ 8-729-180-93**	**TRANSISTOR 2SD809**
Q412	**⚠ 8-729-104-18**	**TRANSISTOR 2SC3514**
Q413	**⚠ 8-729-104-91**	**TRANSISTOR 2SA1383**
Q414	**⚠ 8-729-127-53**	**TRANSISTOR 2SC2275-P**
Q415	**⚠ 8-729-190-53**	**TRANSISTOR 2SA985A**
Q416	**⚠ 8-729-383-73**	**TRANSISTOR 2SC2837**
Q417	**⚠ 8-729-383-73**	**TRANSISTOR 2SC2837**
Q418	**⚠ 8-729-318-63**	**TRANSISTOR 2SA1186**
Q419	**⚠ 8-729-318-63**	**TRANSISTOR 2SA1186**
Q420	8-729-108-14	TRANSISTOR 2SA988-F
Q451	8-729-203-21	TRANSISTOR 2SK389-GR
Q452	8-729-600-27	TRANSISTOR 2SC634SP
Q453	8-729-600-27	TRANSISTOR 2SC634SP
Q454	8-729-699-51	TRANSISTOR 2SA995
Q455	**⚠ 8-729-114-22**	**TRANSISTOR 2SA1142**
Q456	**⚠ 8-729-104-91**	**TRANSISTOR 2SA1383**
Q457	8-729-201-56	TRANSISTOR 2SK246-GR2
Q458	8-729-104-18	TRANSISTOR 2SC3514

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q459	8-729-104-18	TRANSISTOR 2SC3514
Q460 ⚠	8-729-173-13	TRANSISTOR 2SB731
Q461 ⚠	8-729-180-93	TRANSISTOR 2SB809
Q462 ⚠	8-729-104-18	TRANSISTOR 2SC3514
Q463 ⚠	8-729-104-91	TRANSISTOR 2SA1383
Q464 ⚠	8-729-127-53	TRANSISTOR 2SC2275-P
Q465 ⚠	8-729-190-53	TRANSISTOR 2SA985A
Q466 ⚠	8-729-383-73	TRANSISTOR 2SC2837
Q467 ⚠	8-729-383-73	TRANSISTOR 2SC2837
Q468 ⚠	8-729-318-63	TRANSISTOR 2SA1186
Q469 ⚠	8-729-318-63	TRANSISTOR 2SA1186
Q470	8-729-108-14	TRANSISTOR 2SA988-F
Q501	8-729-612-77	TRANSISTOR 2SA1027R
Q601 ⚠	8-729-111-67	TRANSISTOR 2SB1094-L
Q602 ⚠	8-729-364-72	TRANSISTOR 2SB647
Q603	8-729-103-43	TRANSISTOR 2SB734
Q604	8-729-103-43	TRANSISTOR 2SB734
Q605	8-729-108-05	TRANSISTOR 2SC1841-PA
R101	1-246-545-00	CARBON 1M 1/4W
R102	1-246-545-00	CARBON 1M 1/4W
R103	1-246-545-00	CARBON 1M 1/4W
R104	1-246-545-00	CARBON 1M 1/4W
R105	1-246-545-00	CARBON 1M 1/4W
R106	1-246-545-00	CARBON 1M 1/4W
R107	1-247-713-11	CARBON 1K 1/4W
R108	1-247-713-11	CARBON 1K 1/4W
R109	1-247-713-11	CARBON 1K 1/4W
R110	1-247-713-11	(G-AEP).....CARBON 1K 1/2W
R110	1-247-739-11	(EXCEPT FOR G-AEP)..CARBON 100 1/2W
R111	1-247-706-11	(G-AEP)....CARBON 330 1/4W
R112	1-247-706-11	(G-AEP)....CARBON 330 1/4W
R151	1-246-545-00	CARBON 1M 1/4W
R152	1-246-545-00	CARBON 1M 1/4W
R153	1-246-545-00	CARBON 1M 1/4W
R154	1-246-545-00	CARBON 1M 1/4W
R155	1-246-545-00	CARBON 1M 1/4W
R156	1-246-545-00	CARBON 1M 1/4W
R157	1-247-713-11	CARBON 1K 1/4W
R158	1-247-713-11	CARBON 1K 1/4W
R159	1-247-713-11	CARBON 1K 1/4W
R160	1-247-713-11	(G-AEP).....CARBON 1K 1/2W
R160	1-247-739-11	(EXCEPT FOR G-AEP)...CARBON 100 1/2W
R161	1-247-706-11	(G-AEP)....CARBON 330 1/4W
R162	1-247-706-11	(G-AEP)....CARBON 330 1/4W
R201	1-249-465-11	CARBON 47K 1/4W
R202	1-247-706-11	CARBON 330 1/4W
R203	1-247-700-11	(G-AEP).....CARBON 100 1/4W
R203	1-247-713-11	(EXCEPT FOR G-AEP)...CARBON 1K 1/4W
R204	1-247-700-11	(EXCEPT FOR G-AEP)...CARBON 100 1/4W
R204	1-249-516-91	(G-AEP).....CARBON 33 1/4W
R205	1-247-128-00	CARBON 750 1/4W
R206	1-247-128-00	CARBON 750 1/4W
R207	1-247-700-11	CARBON 100 1/4W
R208	1-247-708-11	CARBON 470 5% 1/4W
R209	1-247-695-11	CARBON 39 5% 1/4W
R210	1-247-704-11	CARBON 220 5% 1/4W
R211	1-247-721-11	CARBON 4.7K 5% 1/4W
R212	1-214-937-00	CARBON 1M 1/2W
R213	1-249-565-11	CARBON 3.6K 1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R214	1-214-906-00	METAL 51K 1% 1/2W
R215	1-214-878-00	METAL 3.9K 1% 1/2W
R216	1-247-744-11	CARBON 270 1/2W
R217	1-206-458-00	CARBON 6.2 5% 1/3W
R218	1-247-215-00	CARBON 91 1/2W
R219	1-247-704-11	CARBON 220 1/4W
R220	1-247-725-11	CARBON 10K 5% 1/4W
R221	1-247-704-11	CARBON 220 5% 1/4W
R222	1-247-719-11	CARBON 3.3K 5% 1/4W
R251	1-249-465-11	CARBON 47K 1/4W
R252	1-247-706-11	CARBON 330 1/4W
R253	1-247-700-11	(G-AEP)....CARBON 100 1/4W
R253	1-247-713-11	(EXCEPT FOR G-AEP) ...CARBON 1K 1/4W
R254	1-247-700-11	(EXCEPT FOR G-AEP) ...CARBON 100 1/4W
R254	1-249-516-91	(G-AEP)....CARBON 33 1/4W
R255	1-247-128-00	CARBON 750 1/4W
R256	1-247-128-00	CARBON 750 1/4W
R257	1-247-700-11	CARBON 100 1/4W
R258	1-247-708-11	CARBON 470 5% 1/4W
R259	1-247-695-11	CARBON 39 5% 1/4W
R260	1-247-704-11	CARBON 220 5% 1/4W
R261	1-247-721-11	CARBON 4.7K 5% 1/4W
R262	1-214-937-00	CARBON 1M 1/2W
R263	1-249-565-11	CARBON 3.6K 1/4W
R264	1-214-906-00	METAL 51K 1% 1/2W
R265	1-214-878-00	METAL 3.9K 1% 1/2W
R266	1-247-744-11	CARBON 270 1/2W
R267	1-206-458-00	CARBON 6.2 5% 1/3W
R268	1-247-215-00	CARBON 91 1/2W
R269	1-247-704-11	CARBON 220 1/4W
R270	1-247-725-11	CARBON 10K 5% 1/4W
R271	1-247-704-11	CARBON 220 5% 1/4W
R272	1-247-719-11	CARBON 3.3K 5% 1/4W
R302	1-249-465-11	CARBON 47K 1/4W
R303	1-247-721-11	CARBON 4.7K 1/4W
R304	1-247-722-11	CARBON 5.6K 1/4W
R305	1-247-717-11	CARBON 2.2K 1/4W
R306	1-249-466-11	CARBON 56K 1/4W
R307	1-247-725-11	CARBON 10K 1/4W
R308	1-249-465-11	CARBON 47K 1/4W
R309	1-249-465-11	CARBON 47K 1/4W
R310	1-202-727-00	CARBON 4.7M 5% 1/3W
R311	1-202-727-00	CARBON 4.7M 5% 1/3W
R312	1-202-727-00	CARBON 4.7M 5% 1/3W
R313	1-202-727-00	CARBON 4.7M 5% 1/3W
R314	1-202-727-00	CARBON 4.7M 5% 1/3W
R315	1-202-727-00	CARBON 4.7M 5% 1/3W
R352	1-249-465-11	CARBON 47K 1/4W
R353	1-247-721-11	CARBON 4.7K 1/4W
R354	1-247-722-11	CARBON 5.6K 1/4W
R355	1-247-717-11	CARBON 2.2K 1/4W
R356	1-249-466-11	CARBON 56K 1/4W
R357	1-247-725-11	CARBON 10K 1/4W
R358	1-249-465-11	CARBON 47K 1/4W

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MC-Service

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R359	1-249-465-11	CARBON	47K		1/4W	
R360	1-202-727-00	CARBON	4.7M	5%	1/3W	
R361	1-202-727-00	CARBON	4.7M	5%	1/3W	
R362	1-202-727-00	CARBON	4.7M	5%	1/3W	
R363	1-202-727-00	CARBON	4.7M	5%	1/3W	
R364	1-202-727-00	CARBON	4.7M	5%	1/3W	
R365	1-202-727-00	CARBON	4.7M	5%	1/3W	
R401	1-202-727-00	CARBON	4.7M	5%	1/3W	
R402	1-247-713-11	CARBON	1K		1/4W	
R403	1-247-692-11	CARBON	22	5%	1/4W	
R404	1-247-692-11	CARBON	22	5%	1/4W	
R405	1-247-717-11	CARBON	2.2K	5%	1/4W	
R406	1-247-704-11	CARBON	220		1/4W	
R407	1-247-700-11	CARBON	100		1/4W	
R408	1-247-704-11	CARBON	220		1/4W	
R409	1-247-704-11	CARBON	220		1/4W	
R410	1-246-545-00	CARBON	1M		1/4W	
R412 ⚠	1-217-440-00	FUSIBLE	33	5%	1/2W	F
R413	1-249-490-11	CARBON	27K	5%	1/2W	
R414	1-247-704-11	CARBON	220	5%	1/4W	
R415	1-246-531-00	CARBON	270K		1/4W	
R416	1-247-740-11	CARBON	120		1/2W	
R417	1-249-486-11	CARBON	12K		1/2W	
R418	1-247-764-11	CARBON	10K		1/2W	
R419	1-202-727-00	CARBON	4.7M	5%	1/3W	
R420	1-247-715-11	CARBON	1.5K	5%	1/4W	
R421	1-247-721-11	CARBON	4.7K	5%	1/4W	
R422 ⚠	1-217-446-00	FUSIBLE	100	5%	1/2W	F
R423 ⚠	1-247-710-11	CARBON	560	5%	1/4W	
R424	1-247-718-11	CARBON	2.7K	5%	1/4W	
R425	1-247-710-11	CARBON	560	5%	1/4W	
R426 ⚠	1-217-454-00	FUSIBLE	470	5%	1/2W	F
R427 ⚠	1-217-434-00	FUSIBLE	10	5%	1/2W	F
R428 ⚠	1-217-434-00	FUSIBLE	10	5%	1/2W	F
R429 ⚠	1-217-446-00	FUSIBLE	100	5%	1/2W	F
R430 ⚠	1-217-434-00	FUSIBLE	10	5%	1/2W	F
R431 ⚠	1-217-434-00	FUSIBLE	10	5%	1/2W	F
R432 ⚠	1-217-434-00	FUSIBLE	10	5%	1/2W	F
R433 ⚠	1-217-434-00	FUSIBLE	10	5%	1/2W	F
R434 ⚠	1-217-151-00	RES, METAL PLATE 0.22				
R435 ⚠	1-217-151-00	RES, METAL PLATE 0.22				
R436 ⚠	1-217-151-00	RES, METAL PLATE 0.22				
R437 ⚠	1-217-151-00	RES, METAL PLATE 0.22				
R438 ⚠	1-247-692-11	CARBON	22	5%	1/4W	F
R439 ⚠	1-247-692-11	CARBON	22	5%	1/4W	F
R440 ⚠	1-247-715-11	CARBON	1.5K	5%	1/4W	F
R441	1-249-460-11	CARBON	15K	5%	1/4W	
R442 ⚠	1-217-582-00	CEMENTED	8.2	10%	5W	
R443	1-247-727-11	CARBON	10	5%	1/2W	
R444 ⚠	1-217-446-00	FUSIBLE	100	5%	1/2W	F
R445 ⚠	1-217-446-00	FUSIBLE	100	5%	1/2W	F
R446 ⚠	1-216-431-11	METAL OXIDE	560	5%	1W	F
R447 ⚠	1-217-426-00	FUSIBLE	2.2	5%	1/2W	F
R448 ⚠	1-217-426-00	FUSIBLE	2.2	5%	1/2W	F
R449 ⚠	1-247-688-11	(G-AEP)...CARBON	10	5%	1/4W	F
R451	1-202-727-00	CARBON	4.7M	5%	1/3W	
R452	1-247-713-11	CARBON	1K		1/4W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R453	1-247-692-11	CARBON	22	5%	1/4W	
R454	1-247-692-11	CARBON	22	5%	1/4W	
R455	1-247-717-11	CARBON	2.2K	5%	1/4W	
R456	1-247-704-11	CARBON	220		1/4W	
R457	1-247-700-11	CARBON	100		1/4W	
R458	1-247-704-11	CARBON	220		1/4W	
R459	1-247-704-11	CARBON	220		1/4W	
R460	1-246-545-00	CARBON	1M		1/4W	
R462 ⚠	1-217-440-00	FUSIBLE	33	5%	1/2W	F
R463	1-249-490-11	CARBON	27K	5%	1/2W	
R464	1-247-704-11	CARBON	220	5%	1/4W	
R465	1-246-531-00	CARBON	270K		1/4W	
R466	1-247-740-11	CARBON	120		1/2W	
R467	1-249-486-11	CARBON	12K		1/2W	
R468	1-247-764-11	CARBON	10K		1/2W	
R469	1-202-727-00	CARBON	4.7M	5%	1/3W	
R470	1-247-715-11	CARBON	1.5K	5%	1/4W	
R471	1-247-721-11	CARBON	4.7K	5%	1/4W	
R472 ⚠	1-217-446-00	FUSIBLE	100	5%	1/2W	F
R473 ⚠	1-247-710-11	CARBON	560	5%	1/4W	
R474	1-247-718-11	CARBON	2.7K	5%	1/4W	
R475	1-247-710-11	CARBON	560	5%	1/4W	
R476 ⚠	1-217-454-00	FUSIBLE	470	5%	1/2W	F
R477 ⚠	1-217-434-00	FUSIBLE	10	5%	1/2W	F
R478 ⚠	1-217-434-00	FUSIBLE	10	5%	1/2W	F
R479 ⚠	1-217-446-00	FUSIBLE	100	5%	1/2W	F
R480 ⚠	1-217-434-00	FUSIBLE	10	5%	1/2W	F
R481 ⚠	1-217-434-00	FUSIBLE	10	5%	1/2W	F
R482 ⚠	1-217-434-00	FUSIBLE	10	5%	1/2W	F
R483 ⚠	1-217-434-00	FUSIBLE	10	5%	1/2W	F
R484 ⚠	1-217-151-00	RES, METAL PLATE 0.22				
R485 ⚠	1-217-151-00	RES, METAL PLATE 0.22				
R486 ⚠	1-217-151-00	RES, METAL PLATE 0.22				
R487 ⚠	1-217-151-00	RES, METAL PLATE 0.22				
R488 ⚠	1-247-692-11	CARBON	22	5%	1/4W	F
R489 ⚠	1-247-692-11	CARBON	22	5%	1/4W	F
R490 ⚠	1-247-715-11	CARBON	1.5K	5%	1/4W	F
R491	1-249-460-11	CARBON	15K	5%	1/4W	
R492 ⚠	1-217-582-00	CEMENTED	8.2	10%	5W	
R493	1-247-727-11	CARBON	10	5%	1/2W	
R494 ⚠	1-217-446-00	FUSIBLE	100	5%	1/2W	F
R495 ⚠	1-217-446-00	FUSIBLE	100	5%	1/2W	F
R496 ⚠	1-216-431-11	METAL OXIDE	560	5%	1W	F
R497 ⚠	1-217-426-00	FUSIBLE	2.2	5%	1/2W	F
R498 ⚠	1-217-426-00	FUSIBLE	2.2	5%	1/2W	F
R499 ⚠	1-247-688-11	(G-AEP)...CARBON	10	5%	1/4W	F
R504	1-247-724-11	CARBON	8.2K	5%	1/4W	
R505 ⚠	1-247-120-00	CARBON	360	5%	1/4W	F
R506 ⚠	1-216-430-11	METAL OXIDE	390	5%	1W	F
R507 ⚠	1-213-142-00	METAL OXIDE	820	5%	1W	F
R601	1-246-533-00	CARBON	330K		1/4W	
R602	1-246-529-00	CARBON	220K		1/4W	
R603	1-247-725-11	CARBON	10K	5%	1/4W	
R604	1-246-533-00	(G-AEP)...CARBON	330K		1/4W	
R604	1-249-461-11	(EXCEPT FOR G-AEP) ...CARBON	18K	5%	1/4W	

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R605	1-246-531-00	CARBON	270K	5%	1/4W	
R606	1-249-460-11	CARBON	15K	5%	1/4W	
R607	1-249-462-11	CARBON	22K	5%	1/4W	
R608	1-249-462-11	CARBON	22K	5%	1/4W	
R609	1-247-721-11	CARBON	4.7K	5%	1/4W	
R610	⚠1-206-640-00	METAL OXIDE	100	5%	2W	F
R611	⚠1-206-640-00	METAL OXIDE	100	5%	2W	F
R612	⚠1-213-131-00	METAL OXIDE	100	5%	1W	F
R614	⚠1-249-489-11	CARBON	22K	5%	1/2W	F
R615	⚠1-216-455-11	METAL OXIDE	560	5%	2W	F
R616	⚠1-216-455-11	METAL OXIDE	560	5%	2W	F
R617	⚠1-213-132-00	METAL OXIDE	120	5%	1W	F
R618	⚠1-213-141-00	METAL OXIDE	680	5%	1W	F
R619	1-249-462-11	CARBON	22K	5%	1/4W	
R620	1-249-462-11	CARBON	22K	5%	1/4W	
R621	1-247-128-00	CARBON	750	5%	1/4W	
R630	⚠1-217-434-00	(G-AEP)...FUSIBLE	10	5%	1/2W	F
R651	1-246-533-00	CARBON	330K		1/4W	
R680	⚠1-217-434-00	(G-AEP)...FUSIBLE	10	5%	1/2W	F
R701	⚠1-213-086-00	FUSIBLE	120	5%	1W	F
R751	⚠1-213-086-00	FUSIBLE	120	5%	1W	F
RT401	1-224-550-21	RES, ADJ, SOLID 220 (OFF SET)				
RT402	1-224-248-XX	RES, ADJ, SOLID 470 (BIAS)				
RT451	1-224-550-21	RES, ADJ, SOLID 220 (OFF SET)				
RT452	1-224-248-XX	RES, ADJ, SOLID 470 (BIAS)				
RY201	1-515-495-00	RELAY				
RY301	1-515-495-00	RELAY				
RY601	1-515-503-00	RELAY				
RY602	1-515-356-00	RELAY				
RY603	1-515-356-00	RELAY				
S101	1-554-879-11	SWITCH, SLIDE(INPUT SELECTOR)				
S102	1-570-593-11	SWITCH, SLIDE(REMOTE TYPE) (TAPE SELECTOR)				
S103	1-570-076-11	SWITCH, SLIDE (REMOTE TYPE) (REC OUT SELECTOR)				
S104	1-516-785-XX	SWITCH, SLIDE (ADAPTOR)				
S201	1-554-019-00	SWITCH, SLIDE (REMOTE TYPE) (CARTRIDGE LOAD)				
S301	1-570-594-11	SWITCH, PUSH (2 KEY)(MUTING)				
S302	1-570-595-11	SWITCH, PUSH (1 KEY)(SUB SONIC)				
S303	1-570-596-11	SWITCH, PUSH (3 KEY)(TONE)				
S304	1-570-594-11	SWITCH, PUSH (2 KEY)(SOURCE DIRECT)				
S305	1-570-596-11	SWITCH, PUSH (3 KEY)(TURNOVER)				
S306	1-570-596-11	SWITCH, PUSH (3 KEY)(TURNOVER)				
S501	1-570-592-11	SWITCH, ROTARY (MODE)				
S601	1-554-876-11	SWITCH, ROTARY (SPEAKER)				

ELECTRICAL PARTS

Ref.No.	Part No.	Description
S801	⚠1-552-084-00	(E).....SWITCH, PUSHBUTTON (POWER)
S801	⚠1-552-246-00	(US,Canadian)....SWITCH, PUSHBUTTON (POWER)
S801	⚠1-554-880-11	(AEP,G-AEP,UK)...SWITCH, PUSHBUTTON (POWER)
T1	⚠1-448-631-11	(UK,G-AEP).....TRANSFORMER, POWER
T1	⚠1-448-632-11	(E).....TRANSFORMER, POWER
T1	⚠1-448-633-11	(US,Canadian)...TRANSFORMER, POWER
T1	⚠1-448-634-11	(AEP).....TRANSFORMER, POWER
VR301	1-237-113-11	RES, VAR, CARBON 150K/150K (BALANCE)
VR302	1-237-174-11	RES, VAR, CARBON 250K/250K (TREBLE)
VR303	1-237-173-11	RES, VAR, CARBON 1M/500K/1M/500K (BASS)
VR304	1-237-175-11	RES, VAR, CARBON 120K/120K (ATTENUATOR)
VS801	⚠1-526-576-31	(E)...SELECTOR, POWER VOLTAGE

ACCESSORY & PACKING MATERIAL

Part No.	Description
⚠1-526-565-00	(E)....AC PLUG ADAPTOR
2-297-403-00	SHEET (LARGE), PROTECTION
3-701-630-00	BAG, POLYETHYLENE
3-765-111-12	MANUAL, INSTRUCTION
4-908-877-01	CUSHION
4-908-883-01	SPACER
4-908-893-01	(E)...INDIVIDUAL CARTON
4-916-749-01	(EXCEPT FOR E)...INDIVIDUAL CARTON

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MC-Service

Sony Corporation
Audio Group

9-952-727-11
(including 9-952-363-11)

English
87E0293-1
Printed in Japan
© 1987. 5